# The Builder.

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Haggerston Public Baths: Detail Drawings ..... Mr. A. W. S. Cross, F.R.I.B.A., Architect.

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### *The London Education Bill.*

THE London Education Bill was, as our readers are all aware, introduced into the House of Commons immediately before it rose for the Easter vacation. This gives ample opportunity for those who are interested in the subject of education to express their views upon this important measure. The first question which appears to arise is as to the necessity of a Bill at all. It seems to be the idea of the Government that as they thought it desirable to legislate for the rest of England, it was therefore necessary to bring in a measure to affect London also. The cardinal principle which underlay the Education Act of 1902 was to harmonise Educational Authorities, and, as far as possible, in every county and large town to create one supreme authority for elementary, secondary and technical education. It was also desired to lessen the number of Local Authorities, and for this purpose the County and Borough Councils were made the educational Governing Body. But because such a measure was necessary and desirable for the rest of Engiand, it by no means follows that the principles of that measure were applicable to London.

Let us see for a moment what is the present state of affairs in the Metropolis. A large part of the elementary education is in the hands of the London School Board, though a certain proportion of children are also educated in the Church of England Voluntary Schools, which latter, from a purely educational point of view, should long ago have been handed over to the School Board. Technical and secondary education is in the hands of the Technical Instruction Committee of the London County Council, and there are also voluntary bodies which supply the same sort of instruction. Parts of the higher elementary and of the secondary education necessarily overlap a little, and it is pretty obvious therefore that, if possible, the whole of the education of London should be in the hands of a single body. But if one thing is more clear than another, having regard to the vast size of the Metropolis, the number of the children and young people to be educated, and the immense sums of money involved, it is that there should be one body of first-class importance, to whom the duty of supervising the education of London should be entrusted. No comparison can be made between London and any other large town or county in this respect.

What, then, do we find to be the chief lines of the Government measure? It is to be enacted that the Elementary Schools shall be provided by, and subject to, the general directions of the Local Education Authority. This Authority is to consist of an Education Committee of ninety-two members, thirty-six of whom are appointed by the County Council, thirty-one by the Metropolitan Boroughs and the City, and twenty-five co-opted by the County Council from outside; but the Councils of the Metropolitan Boroughs are to be the managers of the public schools within each Borough, and they are to have qualified powers and duties of management. Technical and secondary education will be in the hands of the Committee, while the Voluntary Church Schools will be in pretty much the same condition as under the Act of last year. It is obvious, therefore, that so far from harmonising and systematising the education of London, the measure just introduced has really a reverse effect. At present, as we have said, though there is a division of authority, it is not wholly unsystematic, for we have the County Council responsible for higher education, the School Board for elementary education, and working by its side voluntary committees of Church people. By the new Bill these divisions are to all intents and purposes retained, with the addition of the Borough Councils as part managers, if we may use this expression, of the schools which are now wholly under the jurisdiction of the School Board.

Jeffrey commenced a celebrated review of a certain great poem with the words—"This will never do!" Adopting a phrase which (however misapplied in that particular case) has become traditional, we may most emphatically say of the present measure, regarding it entirely from the point of view of the improvement of the education of London, "This will never do!" It has in it all the elements of strife and of jobbery which are just the very things which one wishes to get rid of. The Borough Councils are, for example, to purchase the sites for future schools; a fatal blot on the Bill, because the boundaries of these boroughs—in other words, of the old vestries—are not harmonious; it might very well be, if the Bill became law, that two adjoining boroughs would select sites for schools close to each other on the edge of their jurisdiction. Even supposing that this proposal was not carried out, it is clear that there would have to be negotiations between the two boroughs, in which the County Council would also have to intervene, and likewise the Board of Education. Under present conditions, at any rate, we have in the London School Board one undivided authority for the whole of London. It can survey the Metropolis and build a new school here or there, as the case may be, according to the general necessities of the district, and having regard to the proximity or the character of other schools in the vicinity. This example shows very clearly the faultiness of the new measure; but one of the chief objects, as we have always understood it, of legislating for London was to bring elementary and higher education into line, to place them under one authority, so that elementary education in its higher grades could, so to speak, be dovetailed into secondary education, and scholars be enabled to move upwards without difficulty. Here, again, the new measure is obviously seriously wrong; for we get the same division very largely continued, with, as we have said, the undesirable intervention of the Borough Councils. Over and over again last Session, when the Water Bill was under discussion in the House of Commons, and it was urged that as Liverpool and Manchester managed the water supply through their Corporations, London should be in the same position, the reply came that the Metropolis was so different from the other towns of the country that legislation for it could not be on the same lines. It is clear that, as regards education at any rate, London must be looked at as unique. It contains twenty thousand teachers, a million of pupils and students, and expends some four millions a year on education. This represents work which can only be done by a first-class body. Therefore, the education of London should either be in the hands of the County Council, enlarged in numbers so as to be able to deal with this great matter, and with power to co-opt on its Education Committees men and women

who have become skilled on the subject, or in parts of it which relate to manufactures or art; or it should be in the hands of the London School Board, enlarged it may be in numbers, and elected not by the cumulative vote, but by direct election. Either of these alternatives would result in the harmonising and improvement of the elementary, secondary, and technical education of the Metropolis, and would put an end to troublesome existing divisions. It might fairly be hoped, too, that the voluntary schools would presently be absorbed by such a great authority. It is, however, equally clear that to destroy existing conditions and replace them in the manner proposed by the new Bill would be no improvement, but would increase confusion and deteriorate the condition of education in London.

## SHRINKAGE OF THE THAMES AND LEA.

THE chief engineer to the London County Council has presented an interesting report to the Water Committee of that body on the "Shrinkage of the Thames and Lea." It is marked throughout by the careful compilation of statistics, and by the absence of any proposals for remedial measures.

We do not accept the main conclusions presently to be referred to, primarily because they do not apply to that portion of the Thames basin drawn upon for the supply to the Metropolis; whilst the gaugings of the flow of the river at Teddington weir are notoriously incomplete. All the same, the engineer has done a good service in calling attention to several important points in connexion with the water-supply to the Metropolis, and we value the Report accordingly.

The Chief Engineer was desired by the Water Committee to report with reference to the diminution of the volume of water in the Thames and Lea, and dealing as far as possible with the question of the drying up of springs in connexion with those two rivers. But he suffered from not having any authorised expenditure to enable him to carry out his investigations. He begins by stating his conclusions, and we may as well review them in the order they stand in the Report.

The first conclusion arrived at is, as regards rainfall, that for the past twenty years there has been a decline over the Thames watershed of an annual average of nearly 2½ in. below the mean rainfall of 28·50 in., as computed by the late Mr. Symons for the forty years 1850-1889. To substantiate this statement, the rainfall at Greenwich since the year 1815 is quoted, amongst other tables. The rainfall at Greenwich is no great factor in regard to the rainfall of the Thames basin as a whole, and has little to do with the question of water supply, except, perhaps, as regards the wells of the Kent Water Company. Nevertheless, we will take the table as it stands as follows:—

*Greenwich Rainfall in Eight Decennia, 1815-95.*

| | |
|---|---|
| 1815—1825 | 26·27 inches. |
| 1825—1835 | 22·67 „ |
| 1835—1845 | 23·39 „ |
| 1845—1855 | 24·42 „ |
| 1855—1865 | 23·00 „ |
| 1865—1875 | 25·15 „ |
| 1875—1885 | 25·69 „ |
| 1885—1895 | 23·00 „ |

The engineer observes that, as will be seen from the above table, there are really no definite indications of any permanent shrinkage of the rainfall, but he remarks that when we come to analyse the records of the past ten years a very different and a very disturbing element enters into consideration, for it is at once apparent that a succession of low rainfalls has set in during the last decennium. All this is quite true, but it is in the highest degree improbable that such a condition of things can continue, if we may judge from past experience. We have cycles of high temperature and of low temperature, and it is certain that we have also cycles of high and low rainfall. The report is made at a period most favourable for the establishment of the view that the volume of the Thames and Lea is decreasing, but if we refer to the table just quoted we shall see that a similar, or worse, state of affairs existed between 1825 and 1835, and they were no better between 1855 and 1865. The period between 1835 and 1845 was not much better. We deprecate this lumping together of ten years to find an average result. It is far better, from a scientific standpoint, to take one year with another. It must be well known to the engineer that it takes a long time for rain to percolate to a sufficient depth, and so to form the staple source of spring-water which keeps the rivers flowing. One year is not enough to consider, and ten years are too many. In other parts of the Thames Basin the statistics practically point to the same conclusion, and our observations apply in each case.

Another conclusion arrived at is that the decline of the rainfall is reflected in the diminished flow of the river as gauged at Teddington Weir, the natural flow having fallen to an average of 1,110½ million gallons daily at the intakes for the twenty years, compared with 1,350 million gallons over the 1850-1889 period, showing a loss to the river of 239½ million gallons per day. Now the period 1850-1889 was, on the whole, one of high rainfall, and the engineer is undoubtedly right; but we do not quite see the point of his conclusion. If he tells us this to emphasise the fact that great storage is necessary to provide for a period of low rainfall, we are at one with him; but if, on the other hand, he desires to convey the impression that the rainfall in the Thames and Lea Basins is steadily decreasing we should join issue with him on scientific grounds, even if the many statistical tables quoted by him did not disprove his own conclusions. He is astute enough not to draw any conclusions a scientific character, and, to show his impartiality, observes that "against these facts (diminished rainfall) we have the possibility of a long series of wet years, which may bring back the state of affairs which existed on the average during the long period mentioned."

In regard to the remainder of the engineer's conclusions, they chiefly deal with the decrease in the water level in the chalk under London, and the drying up of springs in Hertfordshire. These are facts that have been known for years, and no new light is thrown on the subject. This decrease is known to proceed chiefly from the enormous quantities of water pumped both by the water companies and by private individuals and public institutions, from the chalk; depending upon the locality. When the engineer tells us that this proves that the chalk formation cannot any longer be regarded as such an important water-bearing formation as was formerly thought, we should remind him that there are plenty of areas within the London basin (westwards) and in East Kent to which this fact of the lowering of water level under London does not apply.

Whilst we make these criticisms, however, we do not desire them to be taken as in any sense condemnatory of the Report. There is much food for reflection in the latter, and it bears the impress of careful compilation and consideration.

## NOTES.

**The Venice Campanile.** IN the *Times* of the 10th inst. Mr. E. C. Clark writes a very sensible letter from Venice showing reasons against the proposed rebuilding of the Campanile. One of his points, which is a good one, is that the front of St. Mark's is seen to far better advantage now that the Campanile has gone. No one, of course, would have thought of demolishing the Campanile for that reason; but now that it has died a natural death, it does seem absurd to rebuild a copy of what was in itself an ugly structure, the rebuilt edition of which will have neither historic nor architectural value. As Mr. Clark says:—"The new building will not be the historic tower which is gone, and there are other Campanili. But there is no other front of St. Mark's." We doubt if the money required for the rebuilding will really be forthcoming. But if it is, we predict that those who have subscribed it will realise, after the thing is done, that they have made a mistake.

**Concrete Steel.** EVEN engineers are beginning to question the advisability of regarding steel as a universal material for the framework of structures. Both in this country and in the United States, steel has been employed in the construction of railways, steamships, bridges, office and warehouse and factory buildings, markets, theatres, exhibition buildings, chimney-stacks, water-towers, and water mains. For some of these purposes, there is no doubt that steel alone is perfectly suitable, and in others it is properly used to afford the strength required. But it is clear that the age of steel, as a universal material, is on the wane, and that a return is being made to masonry construction. This reversion has been commenced, and is being continued, by the introduction of artificial stone, formed by the combination of concrete and steel. Concrete alone is not an economical material, because it has high compressive strength and low tenacity. Hence, in the case of a beam, the upper part may be strained to no more than one-twentieth of its ultimate strength, when the lower part has reached the breaking point. This inconvenient property of concrete is remedied by imbedding steel rods at the part where tensile strain may be expected to exist in a member after erection. Considerable attention is now being devoted to the evolution of definite rules for the guidance of those concerned in the employment of the new material, but the following are the bases upon which all rational combinations of concrete and steel should be made. 1. The co-efficients of expansion of concrete and of steel are practically equal. 2. The adherence between concrete and

steel is very high, and a perfect bond exists when steel is imbedded in concrete. In fact, if a steel rod has a length of more than thirty times its diameter, it will break before it can separate from the concrete. 3. Concrete fully protects the steel against corrosion. 4. The ratio of the moduli of elasticity of concrete and of steel are as 1:15, so that if two fibres of concrete and steel, of the same length, be subjected to equal elongation, the resulting stresses will be in the ratio of 1:15. The theory of concrete-metal construction is now clearly enunciated, but economy and reliability can only be attained as a result of scientific design, and it is important that the new material should only be employed by those who are thoroughly acquainted with all essential knowledge.

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Indian Irrigation.

COMPARATIVELY little is heard about the important irrigation works that, in one form or another, are constantly in progress in the Indian Empire. Moreover, the land itself is more or less a sealed book to most people in this country, even to those who take an intelligent interest in geography, but have only access to small scale maps. Two recent works, one completed and the other well in hand, may serve to indicate the valuable nature of the operations carried out from time to time by the Irrigation Department. The first is a weir constructed to facilitate the reclamation and irrigation of a large tract of territory, with an area of some eighty square miles, at the delta of the Bhádar River, which, rising in the Mandhav hills, falls into the Indian Ocean at Navi-Bandar. Bordering the shore line are salt marshes, termed in India "ranns," to which the sea had free access until recent times. These marshes were originally shallow lakes, apparently formed by the gradual elevation of the shore, and in process of time they became silted up with alluvial soil brought down by the river. In the year 1895, a dam about 1,800 ft. in length was built, so as to exclude the sea from the greater part of the rann, and quite lately the weir already mentioned was executed, with the object of retaining the silt and of preventing its dissipation in the form of dust during the dry season. The new work is 600 ft. long, and resembles a regulating bridge, of the kind recently built in various parts of Egypt. The sill is capable of being raised by the aid of wooden shutters, and a navigation lock is provided at one end. The second undertaking to which we refer includes the construction of a large canal intended to provide perennial irrigation for the whole district between the Chenab and Ravi rivers, in the Punjab. This region includes an extensive area of Crown waste lands, and the scheme in question is one of the most important that have been undertaken in India for a long time. A very complete system of water distribution is being worked out both in Government canals and in the village watercourses, and there is no doubt whatever that the final completion of the works will result in an immense boon to the Empire.

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"Heat-Waste" Engines.

IT is generally recognised that the quantity of work derivable from the waste heat of the steam-engine is sufficient to justify serious efforts for its realisation. Experiments have been made in Germany with a binary-vapour system, in which sulphur-dioxide is the secondary fluid, the physical properties of this gas rendering it particularly suitable for employment in such a manner. In addition to tests made upon binary engines at the Berlin and Charlottenburg high schools, a similar machine has been subjected to the test of practical use in one of the Berlin electric-lighting stations. In the last-named instance, the "waste-heat" engine is independent of the steam-engine. It receives the exhaust of the steam-engine and is so attached that the latter may be worked alone in case of accident, or intentional detachment of the auxiliary machine. This combination has proved to be particularly satisfactory, thus confirming in a practical manner the experimental results previously obtained. The cycle of operations in connexion with an engine of this kind is as follows:—Steam exhausts into and is condensed in a condenser, the heat given up serving to vaporise the liquid sulphur dioxide contained in the tubes; the sulphur-dioxide vapour then passes into the cylinder of the "waste-heat" engine, where it is used; the exhaust then enters a surface-condenser, where the sulphur dioxide is liquefied, and whence it is pumped back to the condenser first mentioned. Briefly summarising the results hitherto obtained, it may be said on one hand that the best examples of the best builders of steam engines consume about 11 lbs. of dry steam per horse-power-hour, equal to 11,000 British thermal units per hour, and to 0.75 lbs. of coal per hour; while on the other hand, the combination heat-waste engine is capable of reducing the consumption of steam, heat and fuel to 8.35 lbs. of steam, 10,000 B.T.U., and 0.66 lbs. of coal. Those interested in the introduction of this engine believe it to be so far perfected that nothing stands in the way of its general adoption, and that apart from new installations, considerable advantage will follow the application of the system to existing steam plants. Later experience will indicate whether depreciation, accidents, and interruptions of operation are likely to be greater or less than in the case of well-constructed steam engines.

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The Utilisation of Blast Furnace Gas.

IN countries where water power is conveniently provided by Nature, there is more excuse for neglecting blast furnace gas as a source of energy than is the case in Great Britain. So long as coal has to be employed for the development of power in steam and gas engines, it will be hopeless to anticipate the distribution of electric current for industrial and domestic purposes at low rates. There are, however, great possibilities in blast-furnace gas, as the following figures will serve to demonstrate. Using round numbers throughout, the weight of coke consumed in making each ton of pig-iron is 2,000 lbs.; the weight of gas produced in the blast furnace, and derived from fuel, ore, flux, and air blast, being, say, 10,500 lbs. per ton of pig. The calorific value per lb. of this gas may be safely taken as 1,000 British thermal units. Various records show that it will be reasonable to assume that 25 per cent. of the heat energy contained in the gas can be realised in effective power by the employment of internal combustion engines, and, on the basis of 778 foot-pounds per B.T.U., as the mechanical equivalent of heat, we have 2,545 units as the equivalent of one horse power. Hence 10 lbs. weight of gas is required per horse power hour. Deducting from the total weight of gas produced per ton of pig, the amount required for heating the blast, say, 1,800 lbs., we have left 8,700 lbs., which is equal to 870 horse power per ton of iron produced per hour. From this may be deducted, say, 220 horse power for actuating blowing engines and other auxiliary machinery, leaving a surplus of 650 horse power available for useful work. The production of pig iron in Great Britain is considerably above 1,000 tons per hour, but taking that figure, the total surplus power for the whole country is found to be 650,000 horse power. At the present time, coal-fired boilers are still used in blast furnace plants for the operation of engines and pumps. This is a wasteful practice, requiring immediate abolition, and afterwards means should be devised for making use of the tremendous amount of energy which is now continuously and absolutely wasted.

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Sanitary Regulations and Houses Let in Flats.

SECTION 94 (1) of the Public Health (London) Act, 1891, confers on the Sanitary Authority the power of making by-laws for the regulation of the number of persons who may occupy a house which is let in lodgings or occupied by members of more than one family. In the recent case of Kyffin *v.* Simmons the Divisional Court decided that what consituted a "house" within the meaning of this Section was a question o fact to be determined by the magistrates, but in these days, when flats and tenement houses are becoming daily more used, it appears that some intimation by a superior Court on the principles to be considered in determining this question of fact would have been acceptable as diminishing litigation and securing some uniformity in decisions. As it is, the decided cases furnish no principles. In Kyffin *v.* Simmons, the house was capable of being let rather as one house, or in flats. Each floor had one door to the staircase through which access was obtained to all the rooms on that level, but the sanitary conveniences were common to the whole house when let in flats, this was held to be within the Section. But in Weatherett and Cantley, a block of artisans' dwellings in which there was a common staircase and in which the sanitary conveniences were used in common by the tenants of three and four tenements, an opposite [conclusion was arrived at. The principle on which the Divisional Court in that case seems to have acted was that the building had, strictly speaking, no front door, each tenement being shut off from the common staircase by its own front door, but this is hardly a satisfactory guiding principle, and in that case the Court submitted the Section was difficult of interpretation since the occupation of one set of rooms by lodgers or by members of more than one family might suffice to bring the whole building within the Act.

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Burleigh-street, Strand.

BURLEIGH-STREET stands on the site, in part, of Cecil, since Exeter, House, the home of Sir William Cecil, afterwards Lord High Treasurer. Stow says that the house had been originally built on the site of St.

Martin's parsonage house and its close, by Sir Thomas Palmer, *temp.* Edward VI. On his attainder in 1 Mary the property passed to the Crown. Queen Elizabeth bestowed it upon Lord Burghley, who enlarged the house, and on July 19, 1561, gave a great entertainment there to his Sovereign. Nine years afterwards he leased more ground from his neighbour, the Earl of Bedford. The house and grounds extended from his descendant, Sir Edward Cecil's mansion, Wimbledon House (at the corner of Wellington-street), to the Earl of Bedford's (Southampton-street). Norden writes that it was a very fair house, raised with bricks proportionately adorned with four turrets placed on the four quarters of the house. Cecil House, wherein Evelyn was arrested and for a while kept a prisoner for observing Christmas day, 1657, "the superstitious time of the Nativity," became the home of the first Earl of Shaftesbury, and the birth-place of his grandson, author of the "Characteristics." During six years after the Great Fire, it was used for the Courts of Doctors' Commons, and ultimately gave way to Barbon's Exeter Change which, until 1830, projected into the Strand at the south end of the present Burleigh-street. The two Corinthian columns drawn in G. Cooke's view, and other materials, belonged, reputedly, to the older building. J. H. Burn, quoted by Timbs, avers that at the demolition of the Change in 1830, he saw "Exeter Change, 1670," cut in the stone architrave above the window at the east end. The date is noteworthy as being much earlier than that commonly stated for the alteration of Cecil House as the Exeter Change.

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The Lyceum Theatre.

THE Directors of the Lyceum Theatre will offer for sale at the Mart on Thursday next—a day which a newly-formed Society will celebrate as "Shakespeare's Day"—the freehold property, covering more than half an acre, which comprises the Lyceum Theatre, and Nos. 33-7, Exeter-street, and 21, Wellington-street. The present theatre, a successor of one of the oldest playhouses in London, was opened for English Opera on July 14, 1834, having been built at a cost of 35,000*l.* from plans and designs by Samuel Beazley, who had been architect of the former theatre, built in 1816, at a cost, it is said, of 80,000*l.*, and consumed by fire on February 16, 1830, of which the site was shortly afterwards taken for the laying-out of Wellington-street as an approach to Waterloo Bridge. In a letter written at No. 29, Soho-square, to the *Times* (July 16, 1834) Beazley mentions his builders, Grissel & Peto, and replies to some criticisms that had been made as to his alleged omission of a gallery staircase. He points out that for security's sake

> "all the entrances, together with wardrobes, green-rooms, dressing-rooms, and offices, are placed on the outside of the main wall of the theatre, and the staircase to the gallery is in that compartment on the north side . . . . . [as yet uncompleted for Arnold]."

Beazley built a new green-room in 1838, and a room at the Lyceum for the recently revived "Sublime Society of Beefsteaks," founded at Covent Garden Theatre by Rich and Lambert in 1735. The original Society, whose effects were dispersed at Christie's in April, 1869, had migrated to the (old) Lyceum in S. J. Arnold's time, and in 1838 to a suite of rooms entered from Exeter-street in the present theatre. Twelve years ago C. J. Phipps carried out some alterations of the house, with new entrances and exit-doors, and an enlargement by the taking in of the two restaurants on either side in Wellington-street. The first house, opened as an academy under that name by the Incorporated Society of British Artists, and of which Garrick, fearful of rivalry, bought up the lease, stood in the Strand near the existing south-east corner of Wellington-street. It was bought in 1790, by Lingham, of the Strand, a breeches-maker, for musical performances, and rebuilt on an extended site in 1795-6 for Dr. Arnold, the composer, whose son enlarged the premises in 1809 for his English Opera and Ballet House, which gave way to the former theatre by Beazley. It appears that the sale arises from the shareholders' unwillingness to expend 15,000*l.*, or more, upon certain structural alterations required by the London County Council. On July 12, 1901, we gave the particulars of Sir William Emerson's award in the arbitration before him as between the proprietors and the Council.

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## MAGAZINES AND REVIEWS.

THE *Magazine of Art* is a most interesting number. Mr. Wyllie's third article on "Nature's Laws and the Making of Pictures"—in other words, on the principle of seeing landscapes and objects in perspective, deals chiefly with marine subjects and the placing and drawing of ships in reference to the spectator's position and the direction of the wind. In regard to this latter point he shows, what we think is sometimes overlooked, that the direction of the wind and the manner in which it influences the pictorial position of sailing ships and the direction in which smoke seems to blow from steamers, is all reducible also to the theory of the vanishing point for parallel lines; in his fig. 2 the smoke seems to blow to opposite sides from the steamers to right and left of the "wind's eye," the natural effect of perspective of parallel lines; yet one can imagine the careless spectator saying—"He is making the smoke blow opposite ways." All this article should be studied by those who are painting ships at sea. Again, for the drawing of water: "you can suggest the heave of a big wave if you make the spume and the ripples vanish to different points higher up or lower down, according to the slope you wish to represent." In this article the references to the numbered sketches are all clearly given. Mr. G. H. Palmer, keeper of the Art Library at South Kensington, contributes an interesting article on the history of the Campanile at Venice, illustrated from various old engravings of different dates. In a paper under the title "Strangers within the Gate" (the subject of a drawing which suggested the article), Professor Herkomer gives an interesting analysis of the genesis and working out of a picture. In the course of this he comments on the mistake (to which we have before drawn attention) of confusing that which is of value as a study for the artist with that which should be exhibited as a picture. "When the human model is simply used for pictorial experiment, and the title of 'picture' is given to the result, a great want must be felt by all thinking people." There is a fashion for publishing artist's studies now, and in the pages of an illustrated magazine this is all very well; but mere studies are out of place in an exhibition; it is like offering to the public, as an end in itself, that which should have been only the means to the end. "Artistic working-out is the crux of art, and the sustained effort proves the master. And let it be understood that so-called impressionistic work is *contained* in all great art work." That is the true philosophy of "impressionism," when seriously assumed as constituting a school of art. It merely consists in offering to the spectator the unfinished conception instead of the finished work. The same issue contains an article by Miss Crozier on Mr. Percy Anderson's work as a designer of theatrical costumes. Under "Notes and Queries" Mr. G. Clausen contributes a very sensible letter on the true value of Mr. Raffaelli's solid oil colours, which he rightly characterises as very useful for sketches and studies but in no way calculated to supersede oil and the brush. "Painting," as he says, "is not an easy art;" and no new medium will make it so. The criticism comes with the more force from Mr. Clausen, as he has himself made important experiments with the new material.

The *Art Journal* opens with an account, by Mr. J. Morris-Moore, of "The Royal Raphael Academy at Urbino," or, strictly speaking, of the history and sculptural decorations of the beautiful Renaissance mansion, formerly the home of the Counts of Montefeltro, and now the home of the Raphael Museum and Academy. The details given represent the most beautiful type of work of late fifteenth-century Italian Renaissance. An article on the Loukmanoff cartoons of Raphael's tapestries, offers very strong reasons, as put here, for the belief that these, and not the South Kensington set, are the real work of Raphael; but the article seems rather written in a spirit of advocacy, and we should like to have what facts and arguments can be adduced on the other side; and we may add that the subject is one on which we should rather desire the handling of an accomplished artist than that of the lady amateur who contributes the article. As put here, however, the argument against the authenticity of the English set of cartoons is certainly strong. Mr. R. E. D. Sketchley contributes an article on Blake's wonderful series of designs for the Book of Job—designs, which, in their strange and mystical symbolism, seem almost as if they must have come to us from the far-off early world of religious thought to which the Book itself must be attributed. The author hardly does justice to the wonderful expression of the countenance of Job in the subject where Elihu is speaking; it is not that Job is "docile to Elihu's leading;" it is far more than that; it is the enlightened expression of a face on which hope has dawned at last. Mr. Sketchley draws full attention to the remarkable symbolism of the decorative borders.

The "Easter annual" published in connexion with the *Art Journal* deals with the works of Mr. Alfred Gilbert, and the editor hopes that it will prove of exceptional interest, "partly because the artist's creations have been so seldom reproduced, and partly because of the popularity of the author" of the article. The first is true, though the fact that Mr. Gilbert's works have been so seldom reproduced is entirely the fault of the artist himself, who for years threw every obstacle in the way of any one who wished to illustrate his work. As to the popularity of the author, it is a popularity only with what may be called the secondary class (intellectually) of readers, and we cannot say that Mr. Hatton's opinions on Mr. Gilbert's work are of much importance to us. The fine collection of illustrations, with merely a brief biographical note, would have been more to the purpose. Nor is the sculptor's position benefited by the record of some of his rather captious conversations. Mr. Gilbert seems to have been especially sore because people would not understand that his design for the Shaftesbury Memorial Fountain was never intended to have any reference at all to Lord Shaftesbury. Then we can only say that it *ought* to have had. He was commissioned to design a fountain in memory of a great philanthropist. Anywhere in Paris (and French sculptors can hardly be said to be inferior to English in artistic perception!) a monument designed under such conditions would unquestionably have had some obvious relation to its subject, either by symbolical sculpture or by inscription, or both. There was at first an inscription tablet connecting the fountain with Lord Shaftesbury, but it was abandoned apparently because the sculptor did not like its effect. In short, the monument which was commissioned in honour of Lord Shaftesbury was carried out by the sculptor with entire neglect of the object of the commission, which we cannot think right. With some faults, it is the only artistic street fountain we have in London, and we are glad to have it; but one cannot help feeling that it is not what the artist was commissioned to do. *Au reste*, the number contains many fine illustrations of works which are among the most beautiful and original of modern artistic productions; but we should have been better pleased to have them without

the letterpress. We regret to learn that the sculptor destroyed the clay model, one of his earlier works, of the "Enchanted Chair," in our opinion a most beautiful and poetical piece of sculpture, well worthy of execution in more durable material. As it is gone, we are glad at any rate that we secured a good illustration of it*—a much better and larger one than that in the Easter *Art Annual*.

The *Architectural Record* (New York) contains an article by Mr. Montgomery Schuyler on "The New White House, Washington," which is of considerable interest. The reader is not to suppose that the historic house of the President of the United States has been demolished and rebuilt; it has only been remodelled internally under the direction of Mr. M'Kim, the well-known architect, with some exterior alterations which are really a restoration of the original design; for Mr. Schuyler, who sketches the history of the building and of the rather bad treatment which it has received at different times, is of opinion that Mr. M'Kim's remodelling has to some extent been a return to the intentions of Hoban, the original architect, who appears to have known better what he was about than some of his improvers. Judging from the illustrations, the interior seems now to present about as fine and dignified a *suite* of reception rooms as one could wish to see, and it need hardly be said that all the architectural and decorative details are in the most unexceptionable taste. The aim has been to keep throughout the character of what is known in the States as Colonial architecture — *i.e.*, the late English Classic which was transplanted to the new land during the Colonial period. At the end of the number is a description and illustration of the new grand piano made for the White House, designed by Messrs. J. M. Hunt and R. H. Hunt, and decorated by Mr. T. W. Dewing. The designers were commissioned to make "as beautiful a piano as they could," under no restrictions. The work would have been well worth a larger illustration (with details) than the small and inadequate one given with the article; but it seems to be a fine piece of work. The supports are formed by eagles with outspread wings perched upon short legs which form terminals beneath them; the sides of the wider (front) portion of the instrument are boldly carved with escutcheons and emblems; the receding portions are apparently inlaid with foliage scrolls of Renaissance type. What is done with the top is not shown. The whole is completely French in type, but there is a fine style about it, and it shows that in America, when artists are asked to produce a beautiful piano, they know better than to make it like an oak cistern with iron hinges. In an article on "Living in Paris on 3,000 Dollars a Year" (600*l.*), by Mr. F. Mazade (we presume he is an American as he estimates in dollars), we observe that the celebrated First Empire architects, Percier and Fontaine, are twice referred to as "Perier and Fontaine." One expects mistakes of this kind in a general magazine, but surely they should not occur in an architectural magazine.

The *Berliner Architektur-Welt* contains some interesting competition elevations for the treatment of galleries in the Berlin Art Exhibition. A gymnasium in Friedenau, by MM. Engelmann & Blunck, of Berlin, is a well-treated building. The detail of the gable of the premises of MM. Trunck & Co., in the Kronenstrasse at Berlin, by MM. Hart & Lesser, is a characteristic specimen of the horrors of modern German taste; to us in England it is really inconceivable how any architects could deliberately draw out such detail. It is shown on p. 21 of the number. We are glad to see on p. 32 some furniture of a more sober and rational style than the "art nouveau" work which is too prevalent in Germany now.

The *Architektonische Rundschau* contains plans and full illustrations of a fine building, the Karl Müllersche Public Baths at Munich, by Professor Hocheder of that city. This a building planned on a very liberal scale, and designed in a plain severe round-arched style, but grouped so as to produce a fine architectural effect. The principal swimming-bath, of which an interior view is given, is a fine hall, with a vaulted roof of elliptical section, decorated with an elaborate design in panelling. The substructure, with massive piers, between which is an arched gallery under which the bath is reached, is effective in architectural design. The other illustrations present nothing for special comment. The "Lindenhof," a hotel at Berlin, by Herr Carl Sickel, is a good example of street architecture, somewhat Gothic in general feeling as well as in some of the minor details, though not imitative.

The *Century* has also its article on the White House—"The Restoration of the White House" it is here called; the article is an enthusiastic one by Mr. Charles Moore, and gives us some more details as to the architectural and decorative treatment. He emphasises the point, which was also referred to in the *Architectural Record*, as to the increased dignity which the building has gained by simply restoring the flanking terraces and colonnades to their original architectural purpose; it appears that they had been masked and built up by greenhouses. This article confirms the impression given in the other one, that the interior as remodelled is now a very fine and stately one.

In *Scribner* Mr. Russell Sturgis writes, under "The Field of Art," on "How to Beautify the City"; that is, the American city in particular; but we cannot say that we gather anything very decisive from his article, except that he thinks centralised squares and vista lines matters of little importance; and in that we entirely disagree with him. An article by Mr. Clarence Cary on "Dalny—a Fiat City," is interesting as information. By the odd phrase "a fiat city" the author, we suppose, means a city built to order. Do our readers know where Dalny is? We certainly did not; it is the new terminus city of the Trans-Siberian railway on the North China Pacific coast, and appears to have been built and laid out in advance, for a large residential and manufacturing population, before the advent of that population; certainly, as the writer says, an unusual kind of enterprise in these days. To judge from the illustrations, it appears to be a horrible place, absolutely devoid of beauty or picturesqueness, the only things that are interesting and not hideous (because they do not pretend to be anything but engineering construction) are the dry-docks and wharves.

The *Pall Mall Magazine* contains, under the title "A Rescued Masterpiece," an account by Mr. E. Vicars of the antique statues fished up last year at Anticythera, with various illustrations of the beautiful figure which has been christened a Hermes, and of the method adopted of putting together the parts, fortunately little injured in themselves. We do not know the writer's name in connexion with Greek archæology, but the article is said to be based on information given on the unimpeachable authority of M. Kavvadias.

The *Antiquary* contains the continuation of an article by Dr. William Martin on "The Law of Treasure-trove," a subject of considerable practical interest to archæologists. The present number goes into the legal definitions of treasure-trove. An article on Mont. St. Michel, by "W. H. D." is ostensibly a review of a recent publication, but is a suggestive and interesting article in itself, not a mere review. An article on "Some Essex Brasses Illustrative of Stuart Costume," with reproductions from rubbings of brasses, is furnished by Mr. Miller Christy and Mr. W. Porteous.

In *Knowledge* there is a correspondence between Mr. F. C. Burkitt and Mr. Antoniadi in reference to the assumption of the latter that there was an exterior cross on the dome of St. Sophia, of which Mr. Burkitt asserts that there is no evidence. It is partly a question of right or wrong translation of Paul the Silentiary's account, on which point honours seem to be divided. Mr. Antoniadi's translation of "ἔγραφε," as signifying the modelling of the cross in the round, seems very unusual and far-fetched; γράφειν undoubtedly means, in one sense, to engrave, but it means engraving on or cutting into a plane surface, either of a drawing or a writing, not the modelling of any substance in the round. On the other hand Mr. Antoniadi's translation of ὑπὲρ δὲ ἀκροτάτης κορυφῆς—"above the most extreme Summit," is certainly more accurate than the late Mr. Swainson's "at the highest point," though that might pass as a free translation. In his St. Sophia article of this month Mr. Antoniadi gives reasons for thinking that the interior crown of the dome was occupied by a mosaic figure of the Saviour in a circle. In itself this would be a very probable supposition. If there were a cross on the exterior of the dome it would of course have been removed at the Mahometan conquest, but the traces of its former existence might in that case still be there. Has that been ascertained? The same issue of *Knowledge* contains a thoughtful article by Mr. Walter Maunder on Dr. Wallace's article in last month's *Fortnightly*, "Man's Place in the Universe," to which we have already referred. Mr. Maunder considers, as we did, that Dr. Wallace's argument is illogical and not in the proper sense scientific.

* See *Builder* of January 1, 1887.

## ELY-PLACE, HOLBORN.

THE large block of offices and chambers now being erected by John Greenwood, Ltd., are planned and designed by, we are informed, Mr. Hyman H. Collins and Mr. M. Evelyn Collins as joint architects. The new buildings occupy the site of Nos. 15-20, the Fife Hotel, and Nos. 1-13, Ely-mews, with the dwellings in the rear, containing an area of 15,000 square feet. That freehold property, yielding a rental of 1,968*l.* per annum, was sold at auction on Feb. 23, 1901, for 36,500*l.* The seven houses in Ely-place, and those in the mews, were built in or about 1775 by Charles Cole, Surveyor to the Crown, as architect and builder of the present Ely-place, instead of, as was at first proposed, a new Fleet Prison, upon land which had vested in Christopher, Lord Hatton's son-in-law, Daniel, Earl of Winchilsea and Nottingham. The new chambers, on their south side, stand close to the Roman Catholic church of St. Etheldreda; and their site, with that of the mews, was formerly the pleasaunce and garden-ground of Ely Place, the "inn" in London of the Bishops of Ely. The relative positions of the former buildings lying on the south of the church are shown in the foreground of Mr. H. W. Brewer's two-page drawing—"A Monastic Suburb of Old London in the Sixteenth Century"—published in the *Builder* of January 1, 1898. To his description of the buildings we may here add that Bishop John de Kirkeby (*obiit* 1290) bequeathed to his successors in the See a messuage and ten cottages there, on ground rising from the right bank of the Fleet. William de Louth added to the land and devised the property to the See in 1297 on a condition that divine service should be maintained in the chapel. John de Hotham, who died in 1337, planted the vineyard, kitchen-garden, orchard, &c., which are plotted in Aggas's map; after his preferment to the bishopric in 1374 Thomas de Arundel re-instated the chapel erected in the closing years of the preceding century, and the Palace, and also built the Stone-gate in Holborn where is now Holborn Viaduct. With Aggas's map may be compared A. Van Wyngaerde's view, taken about 1550, preserved at the Bodleian Library, and the bird's-eye view, 1572, in Braun and Hogenburg's "Civitates Orbis Terrarum." Of later drawings the best are those by J. Carter, S. Hooper, Royce, R. Godfrey, and Neale in the Guildhall and national collections. Though the Bishops of Ely made many attempts to recover their property after its enforced bestowal by Queen Elizabeth upon Sir Christopher Hatton, advantage was taken of Bishop Wren's long imprisonment in the Tower for the laying out of the greater portion of the northern precincts as Vine, Kirby, Cross, Charles, and other streets, Saffron-hill, Hatton-garden, Bleeding Heart-yard, and Hatton-wall. Sir Christopher's nephew inherited Hatton House (formerly Ely Place), and his widow, commonly called "Lady Hatton," who married the celebrated Chief Justice Sir Edward Coke, died there on January 3, 1646, defying her husband as well as the deprived bishops to the last. The latter established their rights to some extent; Bishops White, Wren, and Laney (or Lancy) lived and died there. During the occupancy of Bishop Patrick—1691-1707—a rent-charge of 100*l.* upon the Hatton estate was created on behalf of the See, and a plot of ground in Hatton-garden was appropriated for a new chapel erected by Christopher, Lord Hatton, which is now the St. Andrew's parochial schools at the corner of Cross-street. In an indenture of conveyance executed on April 4, 1862, under which the Bishop of Ely and the Church Estate Commissioners convey the St. Andrew's schools in Hatton-garden to the surviving lessees, the schoolhouse, having a small burial-ground attached, is described as having been "intended for a church." The Act 12 Geo. III., c. 43, finally vested in favour of the Crown "the capital mansion-house called Ely House, situate in Holbourn, and the scite thereof .... in order to erect thereon publick offices," in exchange for a capital sum of 6,500*l.*, and a per-

petual annuity of 200*l.* to the occupant of the See, and the building of a house upon ground belonging to Lord Chetwynd in Dover-street, Piccadilly. In 1776-81 all of the old Place, the chapel excepted, was pulled down. The latter structure, which, in its general proportions, resembles St. Stephen's, Westminster, and La Sainte Chapelle, Paris, had meanwhile been put to baser uses; it had served in turn as a military prison and hospital (in the time of the Commonwealth), a soldier's canteen, and beer and wine vaults. In the earlier years of last century it formed a school-room and offices of the National Society, and then, having been opened on December 19, 1843, as a Welsh Episcopalian church, was acquired twenty-eight years ago for 5,400*l.* by the Lazarist Fathers of Charity, and restored by Mr. John Young, jun., and Mr. Bernard Whelan, for purposes of divine worship. The oaken posts in the crypt supporting the floor above were replaced with stone pillars. The Duke of Norfolk presented, for the beautiful east window, some stained glass executed by Saunders & Co., after designs, based upon the older details, by Lonsdale and Mr. F. Weeks. On St. Etheldreda's Day, June 23, 1879, the chapel was rededicated and reopened by Cardinal Manning. Mr. Bentley designed the Gothic screen and gallery at the west end for the organ (by Lewis & Co.); the stained glass representing the martyrs in the west window, where the tracery in the upper part remained, is by Mr. John Hardman. It is to be noticed that the chapel is depicted as without a roof in R. Godfrey's print of 1775. In the course of the repairs in 1875 the timbers of the roof were found intact but concealed by a segmental ceiling of plaster. The removal of the slates in a line up to the ridge disclosed the original timber roof built after the simple manner of the period.

"Its construction is that of a coupled-rafter roof. There is no ridge-piece, and no longitudinal tie except the two wall-plates and the external boarding. The rafters, averaging 8 in. by 6 in., laid flatwise, are about 9 in. apart. There is a vertical strut framed into the inner wall-plate and the rafters, and above are cross-pieces and a collar, all about 8 in. by 4 in. All the pieces are united by double tenons and secured with projecting wooden pegs. The material used appears to be chestnut-wood [*? Quercus castanea*] and is in good preservation."—*Builder*, April 24, 1875.

## THE KING'S SANATORIUM SCHEME.*

IT is hardly too much to say that the awards of the Advisory Committee in the great competition instituted by his Majesty the King for the best essay and plans for the erection of a sanatorium in England for tuberculosis, were awaited with the keenest interest in all parts of the civilised world by those interested in the open-air movement. The facts of the case are fresh in the memory of all, but perhaps few of the general outside public realise what a great conception it was—this determined effort of a great ruler to be the means of restoring health to thousands, and to prevent ill-health to hundreds of thousands more. Consumption is our national disease, and modern research has shown that it is preventable and curable if the people would but learn the lesson lying ready for their use. No more potent means could have been devised for driving home this lesson to the masses, and, when the history of the twentieth century is written with the perspective of years, surely this great effort to stamp out a fell disease will be appreciated at its full and true value.

The competition was open to medical men of all nationalities, and the Advisory Committee contained the names of the highest medical authorities in England, and the prize essays and plans will be read and studied by every public authority striving to eliminate the disease.

The movement is spreading with wonderful rapidity, and fresh impulse must be given to it by this evidence of his Majesty's thought and care for suffering humanity; the opinions, therefore, of the prize-winners will be received as the final and most weighty yet recorded, and as such will have a very important bearing upon the immediate future of the movement. It must have been the wish, not only of every competitor, but of every interested individual, that the prize essays and plans should be as near perfection as possible, and that the result should go out to the whole world challenging criticism without fear.

In any case, we must expect a flood of criticism upon these essays and plans; partly, no doubt, from disappointed competitors; partly from those whose practical experience of open-air sanatoria is in direct conflict with views expressed or dicta laid down therein; and partly from those, who, having a clear grasp of the subject, and taking a broad and impartial view, will judge the essays on their self-evident merit or the reverse.

It is therefore a matter for much regret that of the three prize-winners the third alone has apparently had practical experience. The two first are, it is true, attached to the Brompton Hospital for Consumption, but Brompton is not an open-air sanatorium.

"Brevity will be an important consideration" was one of the conditions laid down, and on this ground it is difficult to see why the first essay is not put out of court. It is an exhaustive inquiry into the history of the treatment and cure of tuberculosis, together with the plans for alternative schemes worked out in detail, supplemented by no less than twenty appendices and thirteen sub-appendices, twenty-five of which give statistics of various sanatoria. These may have had a considerable bearing on the award, but the method obviously places at a disadvantage those competitors who more strictly adhered to the conditions. The method is the more striking when it is seen that the authors of the second essay preface it by the statement that—

"The principles of the treatment are so well known to members of the Committee that we deem it unnecessary to enter at length into theoretical considerations. The main problem resolves itself into the preparation of architectural designs to meet medical requirements. A few preliminary observations are necessary, however, to indicate the basis upon which we have formed our plans."

The third essay follows on similar lines to the second in this regard, and all the remaining five competitors named by the Committee as worthy of honourable mention are associated with architects, and therefore presumably submitted careful plans. The deduction is, therefore, that the plans of the proposed sanatorium were the chief consideration in the eyes of competitors, inasmuch as such plans are the direct expression of their views "on the medical requirements."

It is the plan, then, which must be criticised, for it is only reasonable to suppose that each medical man considers his plan the correct embodiment of his opinion, and is prepared to abide or fall by it. The outward expression of the medical requirements is carried into effect by architects, and their interest in the movement is not less than that of the medical profession.

The following criticisms are from the constructional, or architect's, point of view, and are not intended to express any opinion upon the correctness of this or that treatment.

Let us, therefore, first take a general comparison between the three essays and plans before proceeding to a detailed criticism of each. The result is surprisingly disappointing, for the views and plans of the two first are in marked conflict on most essential points, while the third differs from each of the other two in many respects. The effect on the mind is confusing:—

If A condemns and B strongly advocates a certain feature, such as the verandah or Liegehalle method, which is right? Apparently A, in the opinion of the Committee, because he is placed first. But, if he is right, why is B. second? And if both systems are right each competitor is wrong in condemning the other, which at once weakens the whole case.

It is well, then, for us to take in order the features advocated by No. 1 and condemned by No. 2, and it will be seen what a terrible state of confusion the man will be in who attempts to piece out the right from the medley spread before him. For the sake of brevity, the essays will be referred to as Nos. 1, 2, and 3.

No. 1 advocates the separate block system, and says:—

"Although our plans have been drawn up from the point of view that the system of several separate houses is the best, we have added an alternative plan, which embraces the same principles on the one block system, in case either the site or financial considerations should necessitate its adoption."

But is this not a contradiction in terms? How can a separate house system and a one block system be on the same principles? Surely it is just the principle which is radically different?

No. 2 frankly embraces a one block system, having an almost unbroken front of 700 ft., and in this regard the authors say that the detached blocks or cottage system is attractive, but for various enumerated reasons recommend the erection of a two-storied building. Clearly, in their minds, the two systems are not on the same principle.

No. 1 contends "there is no danger from constant exposure in England," and strongly advocates the patients being acclimatised to exposure

"for his life, not only when in a sanatorium but ever afterwards, depends on his being hardened and on his becoming habituated to an open-air life of every and any degree of inclemency."

No. 2 insists on an elaborate system of heating on the low pressure hot-water system with radiators in every conceivable place, even on the verandahs, as this latter plan "adds greatly to the comfort of the patients as at any time they can remove their couches close to the radiators and obtain warmth if the air feels chilly." Also they refer to the advantages of a brick or stone building over wood as the latter cannot "be so easily maintained at an agreeable temperature."

No. 1 "That the use of recreation rooms or other places of assembly such as churches, must be restricted within narrow limits, and everything avoided which is calculated to tempt patients to stay indoors." And in passages too long to quote fully it is stated that "great injury may result from free indulgence even in such apparently trivial amusements as games of cards," and that "when patients understand that indulgence of any kind retards their recovery they readily adapt themselves to the necessary discipline," though occasional short entertainments and amusements, such as photography and botany, are advocated, and a recreation-room and a small library are provided.

No. 2 takes an entirely contrary view all through; in fact, a great point is made of the monotony of the treatment. "Life in the sanatorium" should be "rendered sufficiently varied and attractive (without detriment to medical details)," and further, "the last-named condition," viz., recreation, "has been *greatly overlooked*,* both in English and foreign sanatoriums," and they have made special arrangements to render the time spent in the sanatorium as comfortable and cheerful as possible, and provide a huge recreation-room, with a billiard-table and bagatelle-board (especially condemned by Nos. 1 and 3), as well as a chapel (if required by the Committee). In fact, the recreation idea has a great influence on both their treatment and plans.

No. 1 contends that "a few open-air galleries are of service, but nothing approaching the Liegehalle system should be erected," and adduces cogent reasons against the adoption of a long verandah.

No. 2 provides a deep verandah along the whole 700 ft. of frontage, and insists on the importance of this feature.

Many other points of contrast could be enumerated, but enough have been given to show what a striking difference there is, both in method and in plan, between Dr. Latham and Dr. Wethered; a contrast which careful perusal of the essays only serves to heighten. It seems evident that the Committee deliberately chose these essays for this reason. But the impartial observer naturally wonders which they consider right, for as has been already said, either one is right and one is wrong, or both methods are correct. In the latter case, why is one placed *first*, for both essays are so far wrong that each considers its particular tenets only in the right. In any case, the direct contradiction in terms must serve only to darken counsel in those who would learn from these selected essays.

Let us now consider each plan, and see how far it carries out the views of its authors. The plans attached to the first essay are difficult to criticise, inasmuch as there are two complete

* The three Prize Essays. 1. "The Erection of a Sanatorium for the Treatment of Tuberculosis in England": By Arthur Latham, M.A., M.D., with whom is associated as architect, A. William West, deputy treasurer of St. George's Hospital. 2. "The Erection of a Sanatorium in England for the Treatment of Tuberculosis": By F. J. Wethered, M.D., F.R.C.P., Lond., with whom are associated as architects, Messrs. Law and Allen, London. 3. Essay and Plans for the Erection of a Sanatorium for Tuberculosis: By Egbert Coleby Morland, M.B., B.Sc., Lond., in association with Geoffrey Morland, architect. Published in the *Lancet* of January 3.

* The italics are the essayist's own.

schemes, and, as previously shown, these, despite the authors' statement to the contrary, are each on an entirely different principle; are, in fact, as widely different as such plans well can be; and the Committee have not enlightened the public as to which plan they considered best. The separate block system is the one favoured by the authors, and shall be considered first. The system consists of a central administration block, connected at each end by a curved covered way with a block for thirty-six male and thirty-six female patients on left and right respectively. The extremities of these latter blocks are again connected by similar ways with a block for paying patients on the left, and a block for sixteen patients in bed, on the right. The extreme distance from the administration block to the end of each wing is at least 1,000 ft.! It is hard to see how four medical men can "constantly supervise" 100 patients spread over such an enormous area, especially when we are told that "during three months of the year one or other of these will be away "on leave"! Yet the conclusion arrived at by the authors in their essay is—

"The buildings of a sanatorium should not extend over so large an area that effective medical supervision is in any way interfered with."

The block for twelve well-to-do patients is a small sanatorium in itself. It is entirely self-contained, and the authors generously provide for each patient not only a bed and sitting-room but a bathroom and water-closet as well, a "superior accommodation" indeed, as the conditions asked for, but hardly in accordance with another condition, "that economy in construction will be an important consideration." The block for sixteen patients in bed who must consequently have every particle of food brought to them is not provided with a kitchen of any kind. The authors specify that food will be brought in Swedish cars from the main kitchen (at least some 1,000 ft. distant)! It will traverse one half of the administration block, the two covered ways, and the entire length of the thirty-six female patients' wing. Consider the service and labour involved in feeding these unfortunate individuals so far removed from the administrative!

If we now pass to the administrative block we find that the arrangement of the plan contradicts the dicta laid down in almost every single particular. The dining-room has staff-rooms and bedrooms on either side of it, and part of it is inadequately ventilated. The nurses' bedrooms are sandwiched in between the upper parts of the recreation-room and dining-room, which so project in front of them that sunshine and air for the nurses must be seriously curtailed. The medical mens' rooms are so placed between the dining-room and another projecting wing that they have but a limited outlook over grounds and buildings, and yet we are told that "the quarters of the medical staff should as far as possible overlook the grounds." The maid-servants' bedrooms, of which only five are shown in the administration block, would in two instances disgrace a third-rate hotel. These have internal walls and top lights only! while a distinct feature of this building is the indiscriminate way water-closets are dotted about in every direction, and dead spaces are called "stores." Mention must also be made of the matron's rooms, which are too badly placed to pass over. Her sitting-room faces west, but her bedroom has a north aspect only, while a bathroom and water-closet open immediately off it.

But the kitchen department is probably the climax of this unfortunate plan. The remarks on kitchens are so strong that it is impossible to refrain from giving them at some length. In one of the many flattering references to members of the Advisory Committee scattered throughout the essay, Sir R. Douglas Powell is quoted as having said that "the sanatorium cook is second only in importance to the physician," and we are told that the diet must range from the fever diet of a hospital to the full diet of plain and wholesome food, and, finally, that the "kitchen and larder and other offices should be dry and well ventilated and free from any source of contamination." What we find is that the larder and pastry-larder *open directly out of the kitchen*, with consequently inadequate ventilation, and in immediate proximity to brushing-room, boot and knife-cleaning rooms; and the scullery is so arranged that a minimum of light and air can be obtained. The cook is clearly considered of so little importance that the kitchen is the only room provided for her use, while the whole department is inconveniently and inadequately planned. One would like to know, for instance, what provision is made for milk after it is received from the farm. Is it kept in the meat larder or the pastry? Or does it stand in the kitchen? Considering that a column and a half is devoted to the "nature of kitchen requirements," &c., the omission of a milk larder is, indeed, striking.

The service block contains the engine and accumulator rooms, water tank, refuse destructor, laundry, mortuary, icehouse, and animal house, and, from what has been already seen, it is not surprising to find the laboratory and research rooms here also! This means that the admittedly very dirtiest and dustiest place in the whole establishment is deliberately selected for the position of the building in which the most minute and delicate operations of research will be carried on, for the three research room windows look on to the yard into which come

"infected rags, paper, old mattresses, pillows, dusters, &c., which are no longer required, together with the various forms of dust and refuse, and their receptacles," which "should be dealt with in a dust-destructor attached to the engine-house."

The alternative plan submitted in the event of the foregoing proving too costly (or perhaps not appealing to the Committee) it is impossible to take seriously. It is more charitable to conclude that the authors prepared it as an after thought, and do not put it forward as in any way exemplifying the views expressed in their essay.

The building is arranged in one long front with inclined wings with the administration block projecting considerably forward in the centre. The dining-hall is at the back of this latter, between it and the kitchen block, and so placed that, except in the summer months, it can obtain little or no sunshine. The kitchen arrangements are on the same lines as before, but in this case servant's bedrooms are arranged over larder and scullery, while over the pastry larder is a servant's water-closet and bathroom, which means that the bath waste discharges on to a trap immediately beneath the pastry window; water-closets are again interspersed with "stores."

The dining-hall occupies a central position between the kitchen block and the administration, without any cross-ventilated passage in between either; it opens, in fact, directly off the entrance hall corridor, in direct opposition to the advantages claimed in the essay for the other method, where the air of the dining-room is referred to as "contaminated." But the most inexplicable feature in this plan is an enclosed *court* round which the administration block is arranged. Now the air in an enclosed court cannot be of the purity and freshness so much insisted on by Dr. Latham, both for patients and staff. In spite of his saying that the medical officers should be, if possible, so placed that their rooms command the grounds, he actually places four of these rooms looking into the court only, while the four others look on to a sanitary tower and the back of the female patients' wing. In view of the fact that "in most sanatoriums as time goes on a large proportion of the staff consists of former patients," the exceedingly poor accommodation provided throughout for doctors, matron, and staff, is a serious blemish.

In spite of the restrictions on recreation in the text, such as deduction No. 10 in the "tabulation of requirements to be met by a sanatorium" that—

"No provision so far as the buildings are concerned need be made for amusements beyond an entertainment-room, which may also serve the purposes of a library,"

and the fact that in the first scheme only one recreation-room and a small library are provided, in Dr. Latham's second scheme he provides a large recreation-room, over 50 ft. square, with a large bow window, but apparently partly ventilated from the *court*, and two large libraries only 10 ft. high, though over 30 ft. square, with big angle bays, the whole projecting, so that they completely shut out morning or afternoon sun from the patients' rooms on either side. It may be also mentioned that the five or six medical men have a library and billiard-room over the patients' libraries, and these two rooms together equal in area at least eleven patients' bedrooms.

Other points might be named, such as servants and nurses bedrooms above patients' rooms, and the scattered way they are arranged. Little or no convenient provision for cleaning patients' boots, and the general inattention to efficent and effective service; but probably enough has been said to show that neither plan correctly gives expression to the statements laid down, while in some ways the second plan is in conflict with the first, and certainly does not bear out the authors' view that in principle they are one.

It has been already shown that the first and second essays and plans are at complete variance in many important particulars. Let us now see how far Dr. Wethered has been successful in making his plans and essay agree, and whether the plan at all fulfils the superior advantages claimed for it. In type the plan is somewhat similar to Dr. Latham's No. 2, namely a one block system, consisting of a central building, with segmental two-story wings, the well-to-do patients being placed in the centre, with the administrative block and kitchen offices centrally placed on the north side, the latter being connected with the main building by a corridor.

"Fifty single bedrooms are placed on the ground floor (six for well-to-do patients and forty-four for the more necessitous classes), and a wide corridor running at the back gives access to each room. As will be noticed on the plans, each of the room doors is situated exactly facing a window placed in the external wall of the corridor. This arrangement has been carefully considered and designed for the purpose of providing through ventilation, and is a point to which the authors wish to call the special attention of the Judging Committee."

But this statement is not correct. The twelve rooms of the well-to-do patients (six on each floor) open on to the corridor, it is true, but immediately opposite them is placed the entire administration block. Two of these rooms on each floor are situated at the ends of cross corridors, one leading to the kitchen block; two are next the block dining-room, and almost opposite the entrance-hall of the institution; two are next the library; whilst four are next cloakrooms and immediately opposite staircases and lifts, where it may reasonably be inferred dust is most likely to be found. Consider then the dust, the noise, and the disturbance, especially as the food service for nearly the whole establishment passes these six ground-floor rooms. Almost the whole executive life is therefore carried on by means of this corridor, and the ventilation of this portion of the building will be largely through the fanlights over the doors of these "well-to-do" patients' rooms. Thus the above-quoted statement of the authors that each door exactly faces a window is at complete variance with the plan. When it is remembered that No. 1 and No. 3 consider it essential to place these well-to-do patients in an entirely separate and self-contained block the contrast is the more glaring.

"It will be noticed that every patient's room in the sanatorium faces south and all are well ventilated."

In spite of this statement the following arrangements are made for cloakrooms and boot-cleaning rooms, which are placed in each wing on right and left of the patients' entrance from the grounds:—

"On the left of the entrance from the grounds a large cloakroom fitted up with hat and coat hooks, boot-lockers . . . . and which will be heated with hot-water pipes for drying the clothes, &c., in wet weather. The bootroom on the left" (*sic*? right) "will be for cleaning the boots and store for any material the boot cleaner may require; this room will also be heated with hot-water pipes."

It is almost inconceivable that this dusty smelling bootroom has no outside wall, but is ventilated and lighted from the main corridor on one side and from the patients' stairs on the other, while a window to the cloakroom on one side of the entrance, and a window next the bootroom borrowed light on the other—and through which each will naturally ventilate—are in immediate proximity to patients' bedroom windows! Of what value, then, are the elaborate precautions against dust and the parade of pure air, when eight patients' rooms are thus situated.

Perhaps the most striking feature of this scheme is the liberal dining-room accommodation, no fewer that six being provided, as follows:—One for the well-to-do patients, one for the forty-four male patients, one for the forty-four female, one for nurses, one for matron, and one for the assistant medical officers, who, therefore, presumably are not expected to dine with the patients. The size of the dining-rooms for the forty-four patients is given as 35 ft. long by 18 ft. 6 in. broad;

mention of the height, however, is carefully avoided. It will scarcely be believed that the plans show this height to be only 10 ft. 6 in., the same, in fact, as the patients' bedrooms, which are 12 ft. long by 10 ft. 6 in. wide. Moreover, windows are only placed in one half of the room. That the authors have some dim perception of the inadequacy of this arrangement may be gathered from the following amusing note on their dining-room plan, "All windows to open"!

A patient's bedroom window is in immediate proximity to one of the dining-room windows, and the dining-rooms are not cut off in any way from the patients' quarters. Compare this with Dr. Latham's summary :—

"The dining-room and kitchen should be completely cut off from the patients' rooms; but no separate dining-room need be provided for the medical staff."

The authors of No. 2 say that in summer the plan of having meals out of doors "has been adopted in some sanatoriums with marked success." Quite so: and one would imagine they would therefore endeavour to provide a room or rooms for meals in which the purity of the atmosphere could be ensured. "A life spent in the open air," one of their first requirements, is hardly carried into effect by the adoption of such rooms as these. They make a great point of these rooms facing south; but surely this advantage is entirely discounted by the disadvantages enumerated above.

Two bedrooms, "which are intended to serve as isolation rooms," and to which patients could be removed "in order to secure greater quiet than can be obtained in the ordinary rooms, or in case circumstances should occur which should render isolation imperative," have been placed in close connexion with the recreation-hall on the second floor—a somewhat novel position, seeing that billiards, musical entertainments, and other forms of amusement are proposed to be held in this room. It would really seem as if they had overlooked the fact that in an open-air sanatorium windows are sometimes open!

As to the kitchen block, it would naturally be inferred that a kitchen that has to provide food for 136 persons would at least conform to the authors' description as being "large, well-lighted, and ventilated." We find, however, that it is completely enclosed on three sides and above, the remaining side being lighted only from a yard some 34 ft. wide and 56 ft. long, with two-story buildings on three sides and a meat larder in the centre Here, again, we are not told the height, but the second floor extends over it, and over the whole of the adjoining offices, which are shown the same height as the kitchen, and this means that either there is enormous waste of space in the upper parts of these smaller rooms, or the height of the kitchen is entirely inadequate. The "head chef" is assigned a bedroom over the kitchen, and no less than seven of the nurses' and servants' bedrooms are 18 ft. long and less than 8 ft. wide; mention must be made of a water-closet which is also 18 ft. long, though but 3 ft. wide.

These may seem carping criticisms, but it must not be forgotten that this is the second selected essay out of 180, and if the authors and the Committee seriously consider that these plans express their views, it cannot be too strongly urged that such views are *not* "on the best lines which past experience and original thought can suggest," to obtain which the competition was inaugurated. Many other points might be adduced, but surely those mentioned are of such intrinsic importance that a scheme containing them is practically worthless. Dr. Wethered has stated in a paragraph already quoted that "the main problem practically resolves itself into the preparation of architectural designs to meet medical requirements," and therefore the whole value of his essay is bound up in his plans. It has been clearly demonstrated that the plans fail in nearly every important particular claimed for them. Of what value then is the essay?

It is refreshing to turn to Dr. Morland's essay, and to find that he, at least, does not claim more for his scheme than his plans show; indeed, it is an epitome of brevity and clearness. His opening paragraphs are worth quoting, for it is interesting to note that neither of the former essays refer even to the hut system, which Dr. Morland clearly considers ideal :—

"*The Ideal Sanatorium.*—In the opinion of the authors of this essay, the ideal sanatorium consists of a series of isolated huts, with windows on all four sides, in which the patients spend their whole time except when they are actually out in the grounds; here they sleep and have their meals, breathing the while an atmosphere beyond the risk of contamination. On a small scale this appears to be practicable; but for a sanatorium of 100 beds, the difficulties of heating, of carrying meals, and of supervision over so large an area, render the scheme impossible with due regard to economy.

*The Compromise.*—The chief problem, then, is to effect a compromise whereby each patient's room obtains a maximum of sunshine and fresh air, and yet is so placed as to ensure economy of management. Hence the unit of our sanatorium is a room facing south, with unobstructed aspect, with a large window space, with a door on the north side opening on to a wide corridor in which there is a large window exactly opposite the door. These rooms occupy the whole south frontage and everything else has been made subservient to the one essential of providing that a current of pure air shall constantly flow through them."

The scheme resembles Dr. Latham's first, inasmuch as it is on the separate block system, but Dr. Morland does not weaken *his* argument by providing an alternative, and his scheme is far more compact and simple. The patients' blocks are entirely detached except by short covered ways, and separate buildings are provided for library, administration, dining-hall, kitchen block, and well-to-do patients, all, however, connected by short covered ways.

Separate buildings, but without covered ways, are provided for the engine block, laboratory, isolation, nurses, and chief medical officer. In disposition, therefore, these plans are markedly different from the others, and the following extracts serve to show how much this difference is accentuated when each part is considered in detail :—

"*Library and Reading-room.*—This is the only common room provided for the patients, as it is intended that, apart from meals, they shall only meet in the open air."

Great care has been exercised in the planning of patients' cloak and boot-cleaning departments, which are so arranged that entry is from the outside only, though attached to the patients' blocks.

"Superior accommodation has to be provided for twelve well-to-do patients, and it was considered inadvisable for these to share a building or even to use the same corridors as the others. The annexe is designed for their accommodation and is complete in itself, except that the patients use part of the common dining-hall.

*Library attached to the Annexe.*—This again is the only common room provided for the annexe patients; the deprivation may appear to be severe, but it is the only really effective method of accustoming them to an outdoor life. A billiard-room is out of the question, as, under the conditions of the treatment, a table would soon be worthless."

The dining-hall is a detached, one-storied building, with an open roof, with linen-room, pantry, and servery on the north side, but so arranged that each table seats seven patients only, in order to facilitate classification; each table is under a window, the windows on the north side being above the pantry, &c. The kitchen is a top-lighted, one-story building, with windows on two sides, and the plans of this department generally fairly express what the authors claim for them; plentiful accommodation being provided for servants and stores. It will thus be seen what an important point the authors make of the ventilation of all these departments, contrasting most favourably with the provisions made by the authors of No. 2 in this respect. It must not be inferred that no adverse criticisms could be passed on Dr. Morland's plans, but they would be on minor points; the main fact remains that his essay accurately describes them, and the more they are studied, the more it is found that practical points have been everywhere considered, and the details are well arranged.

At the risk of repetition it is now necessary to enumerate the conclusions which can be fairly deduced.

1 (*a*) The first essay is anything but brief, is, in fact, an exhaustive inquiry into the history and cure of tuberculosis, which was not asked for, and has not been given in the next two essays.

(*b*) It contains the plans for two completely distinct and opposite schemes, neither of which entirely bear out the author's opinions expressed in the text.

2. (*a*) The opinions expressed in the second essay are almost diametrically opposite to the opinions expressed by the authors of the first and third essays.

(*b*) It resolves itself almost entirely into a description of the accompanying plans, which, in many striking instances, have been shown to lack entirely the merits claimed for them by their authors.

3. (*a*) The third essay is brief almost to a fault, and is simply an accurate description of a plan for a sanatorium for 100 patients; but the authors consider that it is, at best, a "compromise," as 100 patients are too many for an "ideal sanatorium."

(*b*) The lines upon which they consider an ideal sanatorium should be constructed, containing less than 100 patients, are not even touched upon by the authors of the first and second essays.

Do these essays, then, contain "the most valuable opinions which the past experience and original thought" of 180 competitors can suggest, or have the inconsistencies of the first two essays and their respective plans escaped the notice of the Advisory Committee, who, as constituted, cannot be expected to be experts in mastering intricate plans?

Referring, then, to 3., *a* and *b*, it seems almost a pity that competitors were not invited to state their opinion on the number of patients an ideal sanatorium should contain. The number 100 was apparently determined by the Committee, and it is well known that the new Brompton Open-Air Sanatorium now building at Frimley will contain 100 beds; but this building is in the form of a X, a construction implicitly, or explicitly, condemned by the authors of all three essays.

The London Sanatorium at Pinewood, recently erected, is placed on level ground, with no prospect at all except the dreary sight and sound of the soughing pine; but prospect is one of the essential features of the treatment, equally insisted on by all three essayists. Moreover, fireplaces were inserted in each patient's bedroom — an arrangement since found impracticable, and again equally condemned by all three essayists. Serious mistakes, according to these essays, have, therefore, recently been made, and too much care cannot be exercised in the avoidance of them in the future.

The great importance of the competition does not so much lie in the fact that one sanatorium may be built on the basis advocated, but that these essays and plans go out to the whole world ear-marked with the approval of the Committee, while the large number of competitors enhances their value in the eyes of the interested public. The bearing these views, then, will have for the next few years, at least, on the constructional arrangement of open-air sanatoria will be great; and it will, indeed, be a national calamity if the noble idea conceived by his Majesty fails to exert its influence in any direction but the very best.

X. Y. Z.

## *COMPETITIONS.*

WESLEYAN CHURCH, SOUTHPORT. — The plans of Mr. F. W. Dixon, of Manchester and Oldham, have been accepted for a new Wesleyan church in High Park, Southport. The church, which is to seat 660 persons, is designed in Late Gothic, and will be built of Accrington bricks, with Yorkshire stone dressings. The cost is to be 4,000*l*.

METHODIST CHURCH, OLDHAM.—The plans of Mr. F. W. Dixon have been accepted for a new Independent Methodist church in King-street, Oldham. The church will seat 400 persons, and is to cost 3,000*l*.

## *ARCHITECTURAL SOCIETIES.*

THE ROYAL INSTITUTE OF THE ARCHITECTS OF IRELAND.—A regular meeting of the Council was held at the Institute Rooms, 20, Lincoln-place, Dublin, on the 6th inst., Mr. G. C. Ashlin, President, in the chair. A letter was read from Mr. Fuller, dated April 3rd, on the subject of the duties of an architect. The hon. secretary was directed to reply that in the opinion of the Council it is not part of the recognised duty of an architect to sink trial pits, to ascertain the nature of the ground upon which a building is to be erected, although in exceptional cases he may, if he thinks it advisable, recommend this to be done at the expense of the employer. The Council consider that the system universally adopted at present is equitable, as the employer only pays for the work which is actually executed. A deputation from the Master Builders' Association waited on the Council on the subject of rules for tendering. The depu-

tation consisted of Mr. James Beckett, Mr. John Good, Mr. Kiernan, and Mr. Foley. A communication was read from the Institute of British Architects, dated March 28, on the subject of a Conference to consider the question of registration. The Council approved of the proposed reply submitted by the President. A letter was read from the hon. secretary of the Master Builders' Association of Ireland, dated April 1. The hon. secretary was instructed to reply that the Council consider a deputation premature at present, pending the receipt of the report of the Professional Practice Committee.

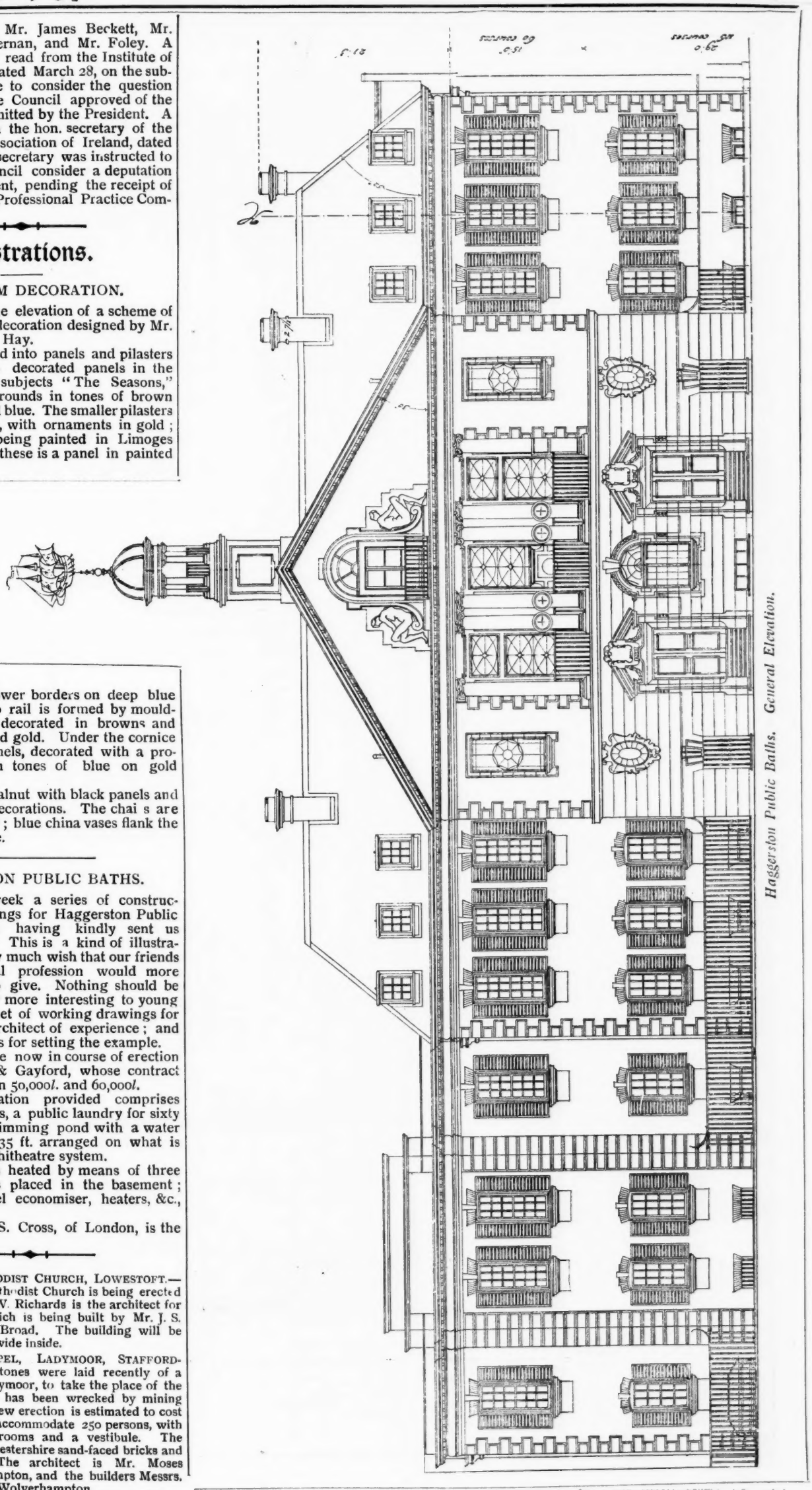
## Illustrations.

### ANTE-ROOM DECORATION.

THIS shows the elevation of a scheme of ante-room decoration designed by Mr. T. Wallace Hay.

The wall is divided into panels and pilasters by mouldings, the decorated panels in the angles having for subjects "The Seasons," painted on vellum grounds in tones of brown and Limoges enamel blue. The smaller pilasters are in grey grounds, with ornaments in gold; the portrait heads being painted in Limoges enamel. Between these is a panel in painted tapestry, having flower borders on deep blue ground. The dado rail is formed by mouldings into panels decorated in browns and Limoges enamel and gold. Under the cornice there are coved panels, decorated with a processional frieze in tones of blue on gold ground.

The doors are walnut with black panels and Limoges enamel decorations. The chai s are in walnut and gold; blue china vases flank the doors on either side.



*Haggerston Public Baths. General Elevation.*

### HAGGERSTON PUBLIC BATHS.

WE give this week a series of constructional detail drawings for Haggerston Public Baths, Mr. Cross having kindly sent us tracings of these. This is a kind of illustration which we very much wish that our friends in the architectural profession would more often enable us to give. Nothing should be more instructive or more interesting to young architects than a set of working drawings for a building by an architect of experience; and we thank Mr. Cross for setting the example.

The buildings are now in course of erection by Messrs. Killby & Gayford, whose contract amounts to between 50,000*l.* and 60,000*l.*

The accommodation provided comprises ninety slipper baths, a public laundry for sixty persons, and a swimming pond with a water area of 100 ft. by 35 ft. arranged on what is known as the amphitheatre system.

The building is heated by means of three Lancashire boilers placed in the basement; and a Green's fuel economiser, heaters, &c., are also provided.

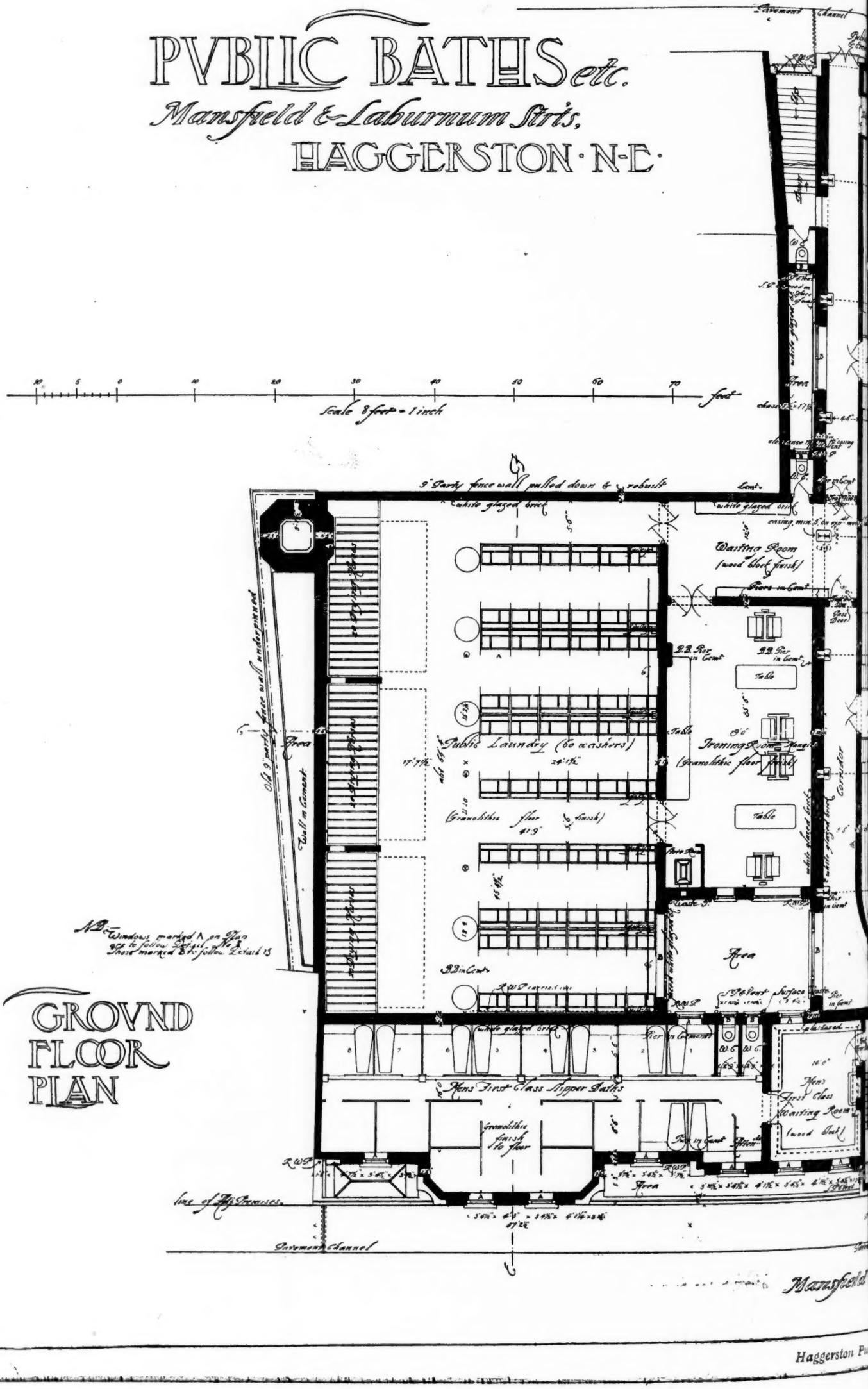
Mr. Alfred W. S. Cross, of London, is the architect.

PRIMITIVE METHODIST CHURCH, LOWESTOFT.—A new Primitive Methodist Church is being erected at Oulton. Mr. F. W. Richards is the architect for the new chapel, which is being built by Mr. J. S. Youngs, of Oulton Broad. The building will be 40 ft long by 28 ft. wide inside.

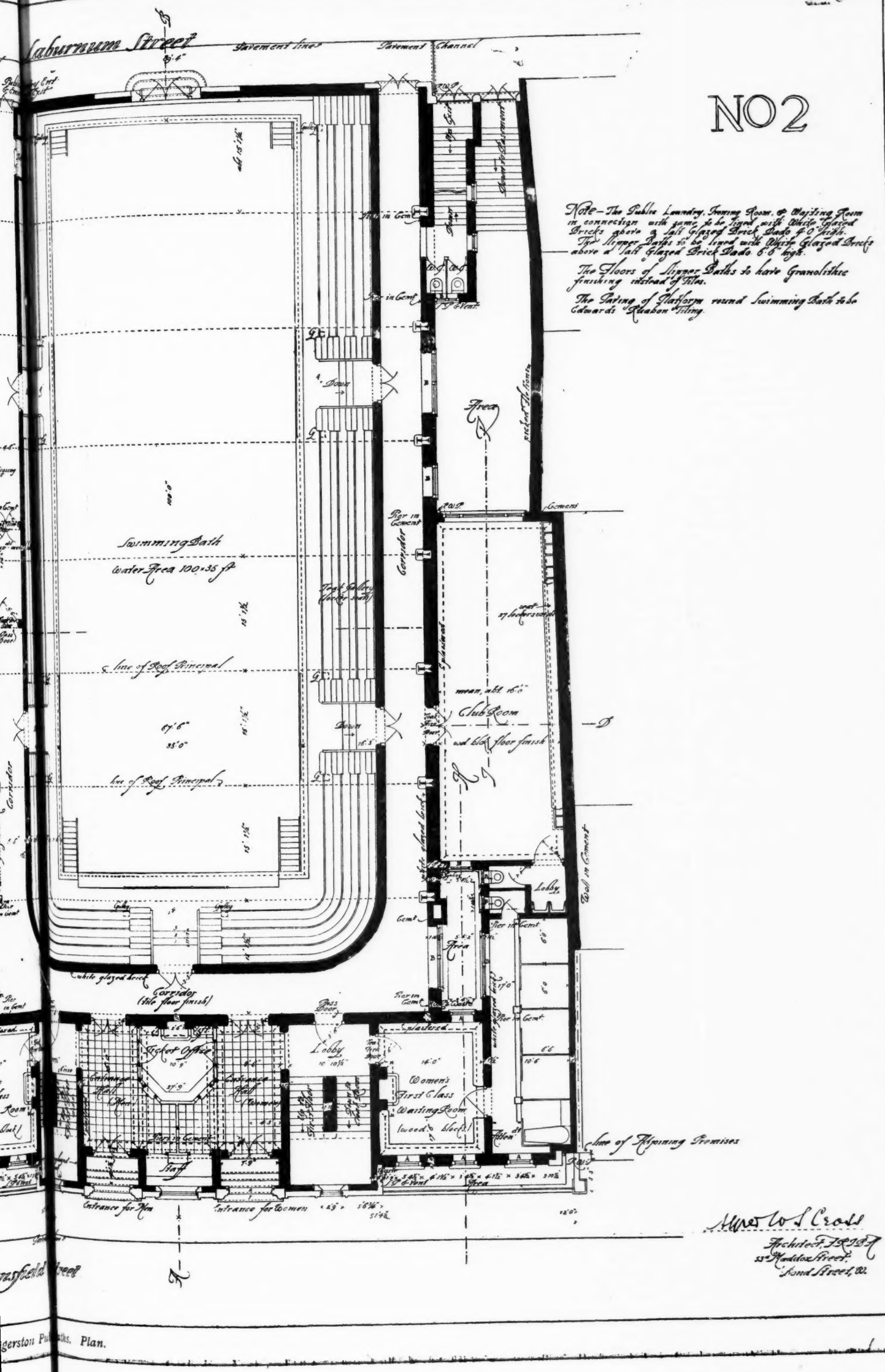
WESLEYAN CHAPEL, LADYMOOR, STAFFORDSHIRE.—Memorial stones were laid recently of a new chapel at Ladymoor, to take the place of the present one which has been wrecked by mining operations. The new erection is estimated to cost 1,000*l.*, and it will accommodate 250 persons, with the necessary classrooms and a vestibule. The front will be of Leicestershire sand-faced bricks and stone dressings. The architect is Mr. Moses Johnson, Wolverhampton, and the builders Messrs. R. Speake & Sons, Wolverhampton.

# PVBLIC BATHS etc.

## Mansfield & Laburnum Strts, HAGGERSTON · N·E·


Scale 8 feet = 1 inch
feet
9' Party fence wall pulled down & rebuilt
White glazed brick
Waiting Room (wood block finish)
Doors in Cement
Public Laundry (60 washers)
Granolithic floor (to finish)
Ironing Room
Table
Old 9' party fence wall
Wall in Cement
Area
Granolithic floor
Kens First Class Dipper Baths
Kens First Class Waiting Room (wood floor)
Kens First Class Slipper Baths
Line of the Premises
Pavement Channel
Mansfield Street
N.B. Windows marked A on Plan are to follow Detail No 2
Those marked B to follow Detail 13
GROVND FLOOR PLAN

Haggerston Public Baths. Plan


Laburnum Street
Pavement lines
Pavement
Channel
NO 2
Note – The Public Laundry, Ironing Room, & Waiting Room in connection with same, to be lined with White Glazed Bricks above a tall Glazed Brick Dado 4'0" high.
The Stripper Baths to be lined with White Glazed Bricks above a tall Glazed Brick Dado 6'6" high.
The Floors of Stripper Baths to have Granolithic finishing instead of Tiles.
The Coving of Platform round Swimming Bath to be Edwards "Rhabon" Tiling.
Swimming Bath
Water Area 100×35 ft
Line of Roof Principal
Area
Club Room
Lobby
Ticket Office
Women's First Class Waiting Room
Corridor (tile floor finish)
Entrance for Men
Entrance for Women
Line of Adjoining Premises
Architect, 19 Hanover Square.

Plan.

## *ARCHÆOLOGICAL SOCIETIES.*

ROYAL ARCHÆOLOGICAL INSTITUTE. — A general meeting of this Institute was held on the 1st inst., Sir Henry H. Howorth, K.C.I.E., President, in the chair. The following exhibitions were laid before the meeting :—A tally lent by the Nottingham Museum, and exhibited by Mr. Philip Norman, F.S.A. ; a silver porringer, or caudle-cup, date 1683-4, and a stoneware jug with silver-gilt mounts, date 1590, exhibited by Lady Reade, with note by C. J. Prœtorius, F.S.A. ; photographs of two Bedwardine tympana by the President ; photograph of a curious tympana from Ulgham, Northumberland, by Mr. C. E. Keyser ; and four eighteenth-century scratch-backs by Mr. C. Garraway Rice, F.S.A. Mr. R. Garraway Rice, F.S.A., read a paper on an illuminated pedigree of the "de Ferrers" family, made in 1612, and presented to the Worshipful Company of Farriers in that year. The pedigree was made by Robert Glover, Clerk of the Company, and freely given by him on October 8, 1612. The original pedigree, although in the possession of the Company as late as 1827, is now lost. In that year it was engraved by W. S. Jenkins at the expense of the Company. The copper plate is also now lost. Three copies of the engraving are known to be extant, viz., one in the possession of the Company, another is owned by Earl Ferrers (it having been presented to his predecessor in 1830), and the one in the possession of Mr. Rice. All of these have been illuminated. The pedigree consists of an elaborate genealogical tree tracing the Earldom of Ferrers from "Henrie de Ferrars or Ferrer, a Norman, whoe came over with William the Conqueror, who gave to hym the honor of Tutbury in the countie of Stafforde" *to* "Robert, Earl of Essex and Ewe, Viscount Hereford and Bouchier, Lord Ferrer of Chartley, Bouchier, and Lovayne, who is now lyving [1612] and keeps an honorable house in Staffordshire." There are also numerous shields of arms. In fifty lines of laudatory poetry in praise of the Farriers Company, Robert Glover attempts to show the connexion between the "de Ferrers" family and his company. Representations of nine instruments used in the art of farriery are worked into and form part of the decorative border. These form, perhaps, a unique series as showing the instruments in use early in the seventeenth century. They are upwards of seventy years earlier in date than those figured by Randle Holme in his "Academy of Armory and Blazon," printed in 1688. It would seem that there was thought to be some connexion between the Earldom of Ferrers and the Farriers' Company, even as late as 1830, for in that year the then Earl Ferrers, in a letter to the Master, expressed his intention "to send a present to the court of half a doe every year." It was in acknowledgment of this that the Company presented to the Earl a copy of the engraving of the pedigree. Captain Ferrers and Mr. C. J. Prœtorius added a few remarks on the paper. Mr. C. E. Keyser, F.S.A., read a paper on Swalcliffe Church, Oxfordshire, and exhibited a series of photographs. Mr. Peers, Mr. Howorth, Mr. T. Blashill, and the President took part in the discussion that followed.

BRITISH ARCHÆOLOGICAL ASSOCIATION.—A meeting was held at 32, Sackville-street, Piccadilly, on the 1st inst., Mr. C. H. Compton, V.P., in the chair. The following articles were exhibited, viz., a fine example of a Pectoral, in silver, from Russia, by Mrs. Collier. A very fine specimen of a polished celt of dark grey whinstone, found by Dr. Manby on the King's Estate, on the "Ailesway," near Dersingham, Norfolk. The "Ailesway" runs parallel with the "Peddar's-way," and runs into it just above West Acre. The celt is of oval section and according to Sir John Evans, belongs to the third class of Neolithic implements. The celt was exhibited by the Rev. H. J. Dukinfield Astley, who also submitted a broken water-worn flint implement of uncertain use, but probably a sinker, found in the river Wensum at Rudham, Norfolk. Two coins, one of Elizabeth, the other of William III., both found at Rudham, and one of James I., from a bog in the North of Ireland, were also shown by Mr. Astley. A paper on "The Effects of the Dissolution of the Monasteries upon Popular Education in England," by the Rev. H. J. Dukinfield Astley, hon. editorial secretary, was read by him. He said we all know what Oxford was like during the Middle Ages, and we know that it was possible for poor men to go there and obtain all the advantages of its learning, culture, and refinement—therefore he would not dwell upon the question of the mediæval universities. It was to be remembered that down to the period of the Renaissance and the invention of printing the people generally, including kings and nobles, were largely ignorant of even the rudiments of letters. The monastic orders were the guardians of such learning as existed, and their houses were the nurseries for the spreading of education wherever they were situated. Upon the education of the bulk of the people the dissolution of the monasteries had a most disastrous effect, for the new schools which were founded, both grammar schools and independent schools, were for the sons of the middle class, notwithstanding statements in their foundation deeds which seem to point in a different direction. On the other hand, the monastic houses and the hospitals were places of learning for the "pauperes et indigentes"—they were the schools of the artificer and the peasant—and with their destruction rural England was left to a large extent destitute of all instruction for over 200 years. An interesting discussion followed the paper, in which Dr. Winstone, Mr. Duppa Lloyd, the Chairman, Mr. Baxter, and Mr. Cheney took part, the latter remarking that "taking the poll-tax return of 1377 as a basis of the population, and, comparing the schools of 1546, this gives 1 for every 8,300 people ; and the Report of the Schools Enquiry Commission of 1865-6 gives no more than 1 secondary school for every 23,700 people. In the poll-tax return forty-two towns are given, every one of which, with the possible exception of Dartmouth, had its grammar school.

## *ENGINEERING SOCIETIES.*

INSTITUTION OF CIVIL ENGINEERS.—At the ordinary meeting on April 7, Mr. J. C. Hawkshaw, M.A., President, in the chair, it was announced that eleven Associate Members had been transferred to the class of Members, viz., Messrs. N. G. Bell, A. Cleghorn, A. Dickinson, R. Henderson, H. P. Hill, H. A. Humphrey, D. McLellan, W. Oxtoby, W. O. Rooper, A. D. Thomas, W. H. Wellsted. It was also reported that eighty-three candidates had been admitted as students. The monthly ballot resulted in the election of three Honorary Members, viz., The Prince Auguste D'Arenberg ; the Right Hon. Joseph Chamberlain, P.C., F.R.S., M.P. ; Sir Archibald Geikie, F.R.S. ; four Members, viz., Messrs. H. S. Bidwell (Cumberland); E. Holbrook (Kansas City, Mo.); S. A. Kirkby, M.A. (Cantab.), Wh.Sc. (Queenstown); S. J. Loane (Madras), and fifty-two Associate Members.

SOCIETY OF ENGINEERS.—At a meeting of the Society of Engineers held at the Royal United Service Institution, Whitehall, on the 6th inst., Mr. J. Patten Barber, President, in the chair, a paper was read on "Road Maintenance and Administration," by Mr. Robert J. Thomas, M.Inst.C.E. Prefacing his remarks by emphasising the necessity of keeping to the legal definition of a "Main Road" in discussing roads, the author stated that there were now 26,978 miles of main roads in England and Wales, as compared with 18,070 in 1889 and that sixty County Councils were responsible for them, whether they maintained them directly, allowed District Councils to do so, or had to leave them to the control of Urban Authorities entitled to keep the maintenance in their own hands. He also stated that forty of these County Councils had adopted direct management, the advantages of which he enumerated. Discussing materials and pointing out the enormous growth in the sale of granite during recent years to the exclusion of other softer stones, he expressed the opinion that for country main roads a size not exceeding $1\frac{3}{4}$ in. or 2 in. gauge was the most desirable, and that too much reliance should not be placed upon tests made under artificial conditions not met with in the daily wear and tear of the roads. Giving the results of tests made in actual wear, he stated that on a country main road, granite surface, steam-rolled, with an ascertained traffic of 100,000 collars per annum, the actual wear averaged 1 in. in five years, that 1·5 in. wear took place along the 7 ft. in centre, and rather more than $\frac{1}{2}$ in. along each of the 6 ft. 6 in. sides. After discussing steam-rolling, scarifying, cleansing, and watering, he defended road labourers against unmerited attacks, and expressed his conviction that, as a class, they were far in advance of their predecessors, and equal to the labour employed in any other industry. The system in force in Buckinghamshire until recently, whereby the County Council contributed towards all other roads, was described, also the improvements effected in the roads. Referring to metropolitan and town streets, and to the exaggerated statements made relative to the streets of foreign towns being so much better than those in London, the author instanced towns in Russia which had been held up as patterns, although they were anything but satisfactory. He laid stress on the unique size of the Metropolis, its variations of climate and temperature, the phenomenal traffic, and particularly the power which companies had been given by Parliament to cut open and block streets, and which was exercised to such an extent that the rights and access of the public to their own thoroughfares were already small and fleeting, and the cost of restoration of surfaces enormous ; all which might be obviated if subways were constructed and the companies compelled to move their pipes and cables into them. He expressed the opinion that slow traffic should be better regulated, that vehicles should be kept close to the near side of the street, that omnibuses should stop at fixed points, and that the loading or unloading of railway and other goods vans should be prohibited in busy thoroughfares. Admitting the necessity for tramways in large towns, and their help in solving the housing question, the author strongly advocated that country roads should be widened to 40 ft. where a double line of tramways was laid, in order to provide at least 12 ft. of metalled roadway at each side. He suggested that traction-engine traffic would be far less objectionable to the travelling public if drivers were licensed and could be dealt with for inconsiderate and obstructive conduct. Dealing with motor-cars, he said that, from his experience in that form of locomotion, the greatest need was the reduction of dust and mud on granite roads, but that the question of additional expense incurred in doing so was one which had to be considered. As to hill-lowering schemes, he expressed the view that this work meant more difficulties and expense than appeared at first sight, and that, as residents in hilly localities should not be called upon to pay more than their share for such work, the cost should be a national one. New road construction for motor and other fast traffic he did not consider feasible, but suggested that the cost of widening existing roads in rural districts sufficiently to provide a dry, hard track might be borne by the State, a tax at per horse-power per car being levied sufficient for its up-keep, and which tax would necessarily diminish as the number of motors increased. Having referred to numerous alterations and amendments which were desirable in highway law, he pointed out how difficult, if not impossible, it would be to make every county or district pay an equal share of the country's road bill, unless the nationalisation of every highway was effected. Failing that, a contribution of one-half the cost would be a partial remedy, or the creation of one highway authority in each county would equalise matters so far as each county was concerned. Stating that agriculture, with its 196,700,000*l.* of invested capital, was entitled to every consideration when the motor-car industry, with its 4,000,000*l.*, obtained so much attention, he expressed the opinion that the introduction of cheap, reliable motors for agricultural work would make powerful allies where sympathy was now at a discount.

# Correspondence.

## THE MOATED MOUND.

SIR,—The communications of "B. T. R. C."* and Professor Baldwin Brown with regard to the ruins of the Saxon Church at North Elmham are of value in more respects than one.

As a side issue, they raise a point to which I wish to draw attention, and it is this, *i.e.*, that they appear to throw—by means of relative and circumstantial evidence—considerable light upon the date of origin of the moated mound.

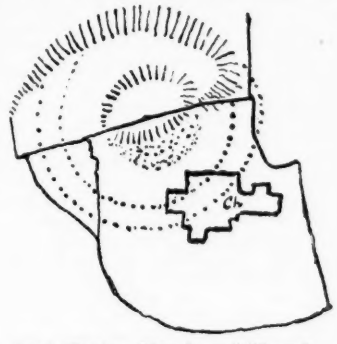
If I have read them aright, it is evident that a portion of the base-court had to be cleared away, before that part of the Saxon church which dates from the tenth century could be erected.

The obvious and necessary conclusion is that the mound and its base-court is of earlier date than some portions of the Saxon church. It is immaterial

* See our issue for March 14.

to the question which I wish to raise—Whether the Saxon walls are of two periods, as "B. T. R. C." contends, or are wholly of tenth century date, as Professor Baldwin Brown argues.

It is interesting to note in this connexion that the Saxon tower of Earl's Barton Church probably stands upon a site once occupied by a portion of the ditch and *enceinte* of the partially-destroyed moated




*Earl's Barton Church and Mound.*

mound which rises immediately from its north-western side.

I enclose an explanatory sketch of Earl's Barton Church and Mound, reproduced from the Ordnance map. The probable outlines of the original mound are indicated in dotted lines.

T. DAVIES PRYCE.

April 6.

## *RE* COMPETITION FOR BUILDING SCHEME AT YEOVIL.

SIR,—The following facts relating to this competition may prove of interest to your readers, and may serve as a warning to intending competitors.

On January 24 last a notice appeared in the *Somerset Herald* to the effect that the Corporation of Yeovil intended to invite competitive plans for the development of some Corporation property in High-street and South-street. Provision was to be made for a technical institute, free library, Town Hall, municipal offices, corn exchange, fish, vegetable, and fruit market, fire station, together with justices' rooms, county court, Mayor's parlour, &c. In addition to these as much as possible of the ground floor in High-street was to be laid out in shops, and the competitors were to decide whether there should be a wide street or a covered arcade in place of a court which at present connects High-street with South-street.

*Premiums of 20 gs. and 10 gs were offered for the schemes placed first and second respectively.*

It was to be understood that the Council had no intention to proceed immediately with the carrying out of the whole scheme, the idea being to begin with the Free Library and Technical Institute.

The attention of the Royal Institute of British Architects was called to the matter, and a letter was written by their secretary to the Corporation pointing out the inadequacy of the premiums and urging the appointment of a professional assessor to draw up the conditions upon the basis of the Institute's "Suggestions." In the meantime, the members of the Competition Reform Society had been requested to abstain from competing, and no notice having been taken by the Yeovil Corporation to the Royal Institue of British Architect's letters, a statement to that effect was published in the Royal Institute of British Architect's "Journal" of March 21, with a request that members of the Institute would abstain from entering the competition.

I have recently received a copy of the list of the Council's replies to competitor's questions arising out of the conditions and particulars issued by the Town Council for the guidance of architects.

The following extracts will give an idea of the spirit in which the competition has been conceived :—

| Questions. | Replies. |
|---|---|
| 1. Will the architect whose design is chosen be engaged to carry out the buildings as the Council's architect ? | Not necessarily. |
| 2. Should any amount as regards cost be considered in designing ? If so, how much ? | No. Arrangement to be considered only. Question of cost will be considered in carrying out. |
| 4. Is there any likelihood that the conditions will be at all revised, as the premiums offered seem low for the value of work proposed ? | No. |
| 36. Will the Corporation give a guarantee that the author of the selected design will be employed to carry out the work ? | No. |
| 38. Will a professional assessor be appointed to adjudicate upon the schemes ? | No. |

These particulars will be sufficient to show that the Yeovil Corporation expects to receive schemes for laying out a large area of ground. The planning of the schemes should entail considerably more work than will be apparent upon the plans submitted, for, in justice to the Corporation, it must be stated that "detail plans of the various buildings are not required," although explanatory drawings to a larger scale ($\frac{1}{8}$ in.) may be submitted at the architect's option. For a scheme of this sort to be of the slightest value it would be necessary to plan roughly the various municipal offices, exchanges, markets, fire station, technical institute, free library, county court, justices' rooms, shops, &c., a task requiring a special knowledge of almost every class of building of a public nature.

For the very considerable amount of thought, work, and special knowledge which would have to be displayed in the preparation of a scheme in order that it might do credit alike to the competition and to the town of Yeovil, the following inducements are offered :—1. Premiums of 20*l.* and 10*l.* respectively to the authors of the two designs placed first. 2. No professional assessor. 3. No undertaking that the author of the selected design will be engaged as the Corporation's architect, or that he shall be employed to carry out the work.

Unfortunately for Yeovil, there have been at least thirty applications for the conditions, and there seems little doubt that a certain number of designs will be submitted. It has been ascertained that the Corporation has little or no money to spend upon the majority of the buildings. Mr. Carnegie has promised 2,500*l.* for a free library, and there is a similar sum available for a technical Institute, one or both of which may be erected shortly.

It is satisfactory to know that the architects of Yeovil have no intention of competing, and that they have already made their protest to the Corporation. It is to be hoped that all architect readers of your journal will do likewise, and so assist in making of the Yeovil competition as big a failure as the recent case of the St. Ives' Municipal Buildings.

HENRY A. SAUL,
Hon. Secretary,
Competition Reform Society.

## QUANTITY SURVEYORS' ASSOCIATION.

SIR,—Your issue of April 4 with Mr. Leaning's long letter has been forwarded to me here. I regret exceedingly that that gentleman has made it such a personal matter as, although I had the honour to be voted to the chair at the preliminary meeting of the Association, I did not issue the circular referred to, which was the joint production of the meeting.

I may, in the first place, reiterate "that no wise London architect would employ a London quantity surveyor for any work he had in the North or Midlands unless his client had unlimited means." This I know from professional experience both on behalf of the builder and building owner. I have appeared for and in opposition to some of the leading London surveyors and architects, and I do not think that, without the aid of this Association, either the London or Provincial surveyors are a sufficiently strong body to enforce any particular system of measurements, and one would think that it would be of the greatest advantage to a gentleman of extensive practice, who has time to write books, to have one system made universal. No doubt the London system has more polish and has more theory about it, but the north country surveyor certainly has more practical experience and knowledge.

The misfortune of using unusual words, some of which appear sadly misplaced, and of lapsing into poetry, is to be deplored in writing a business letter to a professional journal, but the success of the Quantity Surveyor's Association is already assured, as far too many surveyors of eminence, equal even to that of your correspondent, have already joined the Association for us to draw back.

The profession of the quantity surveyor is vigorous, while that of the surveyor *per se* is dying out owing to ordnance survey and other causes. So also will the Quantity Surveyors' Association flourish. Is it not wiser therefore to join hands in good fellowship, as I can assure you that with or without the kind assistance of your correspondent, with or without the goodwill of the Surveyors' Institution, the Quantity Surveyors' Association is already in existence and it is intended to hold the first meeting at the end of this month, and we cordially invite the co-operation of the Institution and also of Mr. Leaning, who will do better for himself and for us by giving us the benefit of his advice and experience instead of making rude remarks about the profession we all live by.

W. HOFFMAN WOOD (of Leeds).

*Spezia (Riviera).*

## THE VENTILATION OF SCHOOL BUILDINGS.

SIR,—I have been hoping to see some one write on behalf of the heating and ventilating profession in answer to Mr. Felix Clay's letter in your journal for March 21, but as no one appears to have done so, I would like to make a few remarks in answer to his theories in connexion with the application of the "Plenum System."

Mr. Clay says that "he cannot touch the practical details of the subject in a letter," but I feel sure that those in the business will agree with me that it is mainly a question of practical detail which governs the success or otherwise of a "Plenum" system.

1st. Mr. Clay states that in winter the air enters the room at a high temperature, and is cooled by the walls, windows, &c., and that the children breathe the hot air. I do not see how this can be the case, because the temperature of the incoming air is governed in such a way that by the time it comes in contact with the children it is at a temperature of 60 deg. Fahr.

Mr. Clay also speaks of the deleterious effect of heated air. Everything depends upon the way in which the air is heated. There are, of course, firms who, with the idea of reducing the first cost, so reduce the piping and heating surfaces that a pressure of steam sometimes reaching 20 lbs. to 30 lbs. per square inch (259 deg. to 274 deg. temp. Fahr.) has to be carried. Steam at such a pressure and temperature deprives the air of much of its oxygen, and renders it less wholesome for the occupants of a building to breathe; but a properly-designed plant, working under a low steam pressure of from 1 lb. to 2 lbs. per square inch (215 deg. to 219 deg. temp. Fahr.), sometimes working at atmospheric pressure and oftentimes less, does not change the constituents of the incoming air, and causes no deleterious effect upon the occupants. On the contrary, it can be proved over and over again where the "Plenum" system has been erected for board schools, and even asylums, that the beneficial effects have been very marked indeed. The health and physical properties of the teachers, children, and inmates have been considerably improved by the use of such system, and I think that perhaps if Mr. Clay made inquiries from teachers who have been working in a school both before and after the application of the system he will find how much it is appreciated.

2nd. Mr. Clay makes objection to the method of forcing air into a room at a high level in summer and extracting the air at a low level, mainly because he claims that the air being cold will "short circuit" from the inlet to the outlet; but he overlooks the fact that the air will enter the room at a velocity of some 5 ft. or 6 ft. per second, and will travel across an average sized room spreading itself when descending.

It is most unpleasant to be in a room with the inlets arranged near the floor. The reason for this is obvious, as they necessarily cause draughts for those who have to sit near them, and I feel sure that if Mr. Clay will take the trouble to obtain some practical experience with a "Plenum" system, or even an automatic system, where the air enters at a high level, as compared with a system where the air enters at a low level, he will soon become favourable to the high level method either in winter or summer.

Mr. Clay admits that "downward ventilation" proves successful in models, but I can assure him that it proves successful in actual operation. I happen to notice that good ventilation in buildings is frequently conspicuous by its absence, and were I desirous of advertising myself I could mention many buildings, public and private, where the air inlets in the *ceiling itself* and *the outlets at the floor level* work perfectly, and are giving the most satisfactory ventilation in summer and winter alike.

R. W. S.

## LONDON DISTRICK SURVEYORS.

SIR,—Ther ar too sides to moast questions and i feel i canot allow yure correspondence who signs himselfe "Building Act" to pass without a wurd from one who as been grosely vicktimized by districk Surveyors i think 300*l.* a year is twict as much as theas fellers is wurth for interfereing with a man as is trying to get a honest liveing i flatter myselfe i no how to make a yard of lime go as far as moast people and a ole brick is better has a good menny new uns i for one shal wellcome a reduction in the sallary of theas offishous gentleman and think the young fellers as Mr. Building Act refers to will be much easier to get on with i dessay they wil be glad to mak a bit extry on there low wages and they can alwis look to mea for a bit if they don't sea two much.

JERRY BUILDER.

P.S.—If you here of a good little "spec" you might let mea no.

## *OBITUARY.*

MR. DAY.—We regret to announce the death at his residence, No. 18, Bloomsbury-square, on April 6, after a painful illness, of Mr. Richard Philip Day, Diocesan Surveyor for London. Mr. Day was elected an Associate member of the Royal Institute of British Architects in 1882, and was until recently surveyor for the two dioceses of Canterbury and London. Of his more important architectural works, we may instance the following :—The church of St. John the Evangelist in Brunswick-square, Herne Bay, which when completed will cost about 8,000*l.*, and of which the nave and aisles were begun in the summer of 1898; the decoration, re-seating, and other improvements of Christ Church, Newgate-street; the re-building of St. Paul's Church, Thornton Heath, near Croydon, of which, as the first portion of the entire designs, the nave, west aisles, and baptistry were erected two years ago by

Messrs. Stewart & Sons, of Wallington, at a cost of about 6,500*l.*; St. Mark's Church, Newnham, Cambridge; the church of St. Augustine, at Crayford, Kent; and a church, after the early English style, at Slade Green, Erith, of which the aisle and three bays of the nave were built in 1899 at an initial expenditure of 2,000*l.*; he was the architect also, we believe, of the church of St. Mary, at Milton-next-Sittingbourne in Kent. Mr. Day acted as honorary architect for "St. Hilda's" Settlement in Old Nichol-street, a home, for sixteen ladies, established and maintained by a guild of past members of Cheltenham Ladies' College, and opened on April 26, 1898, on the site of the "Old Jago" in Old Nichol-street, Shoreditch, a once notorious quarter, but since greatly improved. The Settlement was first founded at Mayfield House, Bethnal Green, in 1890, in association with some ladies from Oxford. In conjunction with Messrs. William and C. A. Bassett-Smith, Mr. Day prepared the plans and designs for the church of St. Gabriel in Chichele-road, Willesden Green, of which the first portion of the nave and aisles, after the Early Decorated style, were built at a cost of about 7,000*l.* by Mr. J. Bentley, and consecrated in October, 1897. The complete designs, including chancel, Lady Chapel, and chantry, provide for a total of 1,000 sittings. Mr. Day succeeded his former principal, Mr. Gordon Hills, as Surveyor for the London Diocese, and was a leading authority in the matter of "fixtures," and the assessment for dilapidations of parsonage houses.

MR. BOTTERILL.—We regret to hear of the death, on 2nd inst., at an advanced age, of Mr. William Botterill, of Brookside, Newland Park, Hull, senior partner of the firm of Messrs. Botterill, Son, & Bilson, of No. 23, Parliament-street, Hull, architects and surveyors. Mr. Botterill had practised during a very long period in Hull, and was architect to the School Board Mr. Botterill was the architect (1870) of the York City and County Banking Co.'s offices, in Lowgate, Hull, treated after the Venetian Renaissance manner, and (1865) of the Merchants' Exchange at the corner of Lowgate and Bowlalley-lane, erected on the site of the old Suffolk Palace, the residence of the De La Poles; the Exchange Buildings comprise offices for the Hull Chamber of Commerce, and the main principal hall measures 70 ft. by 40 ft., and is 32 ft. high —both structures are illustrated in the *Builder* of April 2, 1898, mentioned below. For the Hull School Board he and his firm planned and designed the head offices in Albion-street; the schools in Dalby-road (with an enlargement) and in Holland-street (estimated cost of about 17,100*l.*), having a central hall and eight classrooms for 460 children; the Higher Grade School in the Boulevard; and the Central Higher Grade School in Brunswick-avenue. They were architects of the Globe warehouse in the High-street, a successful rendering of what is, in itself, a commonplace theme; Hay's Flour Mills in Grosvenor-street; and the vicarage of St. Philip's in Charlotte-street, Hull; also of the Grammar School, Bessingby-road, Bridlington, built in 1898-9, at a cost of more than 8,500*l.*, and since enlarged under Mr. Bilson's superintendence, with five additional dormitories, masters' rooms, studies, &c., and completion of the group of classrooms on the three sides of the central hall; the boardroom and offices at the Beverley Union Workhouse; extensive additions to the parochial schools at Hessle, Yorkshire; and the new buildings on the west side of Queensgate for Beverley Grammar School—the plans providing for a central hall and more classrooms at the south end when extensions are required hereafter. Of other the more important works carried out by Mr. Botterill and his firm we have illustrated—Hymer's College, built at a cost of nearly 13,000*l.* for the fabric, in 1890-1, on the site of the old botanical garden, Hull, after the Jacobean style treated in a free and modern manner, for which they gained the first premium upon the award of Mr. E. C. Robins, the assessor—June 28, 1890, and January 16, 1892, as slightly modified in execution; the Board Schools for 890 children at the corner of Stepney-lane and Beverley-road, Hull (W. Botterill)—January 14, 1888; Hull and Sculcoates Dispensary, Baker-street, Hull, for which their designs, adapting the Flemish Renaissance to modern requirements, were chosen in a competition limited to four nominated architects—September 15, 1888; restoration of the old double rood-screen in St. Mary's Church, Beverley, erected after the fall of the central tower in 1520, and since mutilated to fit into a narrower space beneath the east arch of the crossing—March 24, 1894 In our article of April 2, 1898, upon "Hull," we also illustrated of their designs the following—Hymer's College (two views, the south-west angle and the porch); the Girls' Industrial Schools in Park-avenue; the Beverley-road Board Schools; the Higher Grade Board School in Craven-street; and the Hull and Sculcoates Dispensary, cited above. The buildings of Hymer's College and the Craven-street School present, as we pointed out at the time, quite the most satisfactory examples of school architecture in the town. We should add that in August, 1887, the firm obtained the second premium in respect of their competitive designs for the Victoria Hospital for Sick Children, in Hull; and that two years ago their plans were approved for an enlargement to accommodate twenty-two more nurses, at a cost of some 4,000*l.*, of the Nurses' Home at the Royal Infirmary, Hull, after, we understand, a limited competition.

## *GENERAL BUILDING NEWS.*

CHURCH, BURNOPFIELD.—An addition has been made to the United Methodist Free Church at Burnopfield at a cost of 1,400*l.* An addition, 39 ft. by 12 ft., has been made to the north end of the church, giving extra accommodation for 110 persons. The school has also been enlarged 27 ft. by 14 ft. Four classrooms have been built on the east side of the school, and on the north end are a club-room and church parlour. Near the church a house of five rooms has been built for the caretaker. The buildings will be lighted throughout by electric light. The architect was Mr. Arnold Kyle, and the builder Mr. Alfred Davis.

PRESBYTERIAN CHURCH, BALLYEASTON, BELFAST.—Re-opening services in connexion with this church were held recently. The church has been entirely remodelled, and is practically a new one, except the walls and roof, which have been merely repaired. The seating accommodation on ground floor and gallery is for about 620 people. A vestibule 10 ft. wide and the full width of the church, with a tower 60 ft. high to the top of the vane, has been added to the west end, and a new vestry and heating-chamber have been built in the north side. The church has been replastered inside and out, a new varnished pitch-pine ceiling has been put up to replace the old plaster one, and the floors, gallery, pulpit, pews, and other woodwork are new. The pulpit, choir seats, communion table, &c., are constructed of yellow pine, walnut stained and French polished. The pews, gallery fronts, dadoes, &c., are of varnished pitch-pine, with walnut cappings, &c. The floor of the vestibule is of marble terrazzo, laid by Mr. J. F. Ebner, of London. The church has been heated with hot water by Messrs. Musgrave & Co., Ltd., Belfast, and the leaded and stained-glass windows have been executed and fixed by Messrs. Ward & Partner, Belfast. The builder was Mr. W. H. Beggs, and the architect Mr. N. Fitzsimmons, of Belfast.

RESTORATION OF GUNTON CHURCH, LOWESTOFT.—The ancient little church of St. Peter, Gunton, near Lowestoft, was re-opened recently after restoration. The building is of flint with stone dressings, consisting of chancel, nave, south porch, and low round western tower; and has two Norman doorways. The work of restoration has been in hand about twelve months, and has been carried out under the superintendence of Mr. Green, architect, of Norwich, the woodwork having been entrusted to Messrs. Grimson, of Loddon, and the stonework to Mr. Hall, of Norwich.

IMPROVEMENTS, BRIGHOUSE PARISH CHURCH.—Alterations and improvements at the parish church, Brighouse, are to be undertaken, at a cost of about 5,000*l.* Plans by Mr. C. H. Fowler, of Durham, have been approved, and the chief feature of the improvements is the construction of a chancel and an open-timbered roof.

EXTENSION OF BEDWELLTY WORKHOUSE, MONMOUTHSHIRE.—A meeting of the Bedwellty Board of Guardians was held at the Workhouse, Tredegar, recently, when the Building Committee recommended the adoption of the plans of the proposed extensions to the Workhouse prepared by Mr. D. Morgan (Messrs. James & Morgan, Cardiff). The recommendation of the Committee was adopted.

BUILDING IN ABERDEEN.—The Plans Committee of Aberdeen Town Council have sanctioned the following plans:—Dwelling-house and stabling on the west side of Diamond-street for Mr. Charles Campbell, per Messrs. Brown & Watt, architects. Three dwelling-houses on the north side of Walker-road, for Mr. John Gammie, per Messrs. Cameron & Watt, architects. Workshop on the west side of Causewavend for Messrs. J. & A. Arthur, per Mr. R. C. Garden, architect. Stonecutters' sheds, polishing mill, &c., on the south side of Pittodrie-street for Messrs. Coutts & Cosgrove, granite merchants, per Mr. Duncan Hodge, architects. Timber sheds in connexion with sawmills at Martin-avenue for John Fleming & Co., Limited, per Messrs. Sutherland & Pirie, architects. Stovehouse in connexion with sawmills at Martin-avenue for John Fleming & Co., Limited, per Messrs. Sutherland & Pirie, architects. Stone-polishing sheds on the south side of Pittodrie-street for Messrs. Coutts & Younie, granite merchants, per Mr. R. G. Wilson, architect. Dwelling-house on the south side of Broomhill-road for Mr. Robert Farquhar, Broomhill-road, per Mr. R. G. Wilson, architect. Dwelling-house and dairy on the west side of Holburn-street for Mr. Henry Robertson, per Messrs. Walker & Duncan, architects. Dwelling-house on the south side of Howburn-place for Mrs. Elizabeth Macdonald, per Messrs. Cameron & Watt, architects. Two dwelling-houses on the west side of Moray-place for Messrs. Gray & Kellas, per Messrs. Cameron & Watt, architects. Alterations and additions in connexion with Concord House, Fonthill-terrace, for Mr. L. Barrie, per Mr. John Rust, architect. Six dwelling-houses on the east side of Forest-road for Mr. Robert Smith, per Messrs. Brown & Watt, architects. Boathouse at South Esplanade West for the Victoria Rowing Club, per Mr. W. E. Gauld, architect. Shed and latrines in connexion with sawmills at Martin-avenue for John Fleming & Co., Ltd., per Messrs. Sutherland & Pirie, architects. Dwelling-house at Gordon's Mills-road for the Donside Paper Mills Co., Ltd., per Mr. A. H. L. Mackinnon, architect. Stone-polishing mill and stone-cutters' sheds on the east side of Canal-road for Messrs. John Third & Son, granite sculptors, per Mr. William Smith, architect.

SCHOOL, LUMPHINNANS, FIFESHIRE.—A new school is being erected at Lumphinnans, Fife. Mr. Wm. Birrell, of Kirkcaldy, is the architect. A central corridor, which runs the full length of the premises, is 233 ft. long and 15 ft. wide. The roof is composed of open timber-work, while the walls are lined with white tiles. In the centre is situated the infant department. When fully completed, the buildings will accommodate 1,000 pupils.

SCHOOLS, TRAFFORD PARK, MANCHESTER.—In Trafford Park, on the 10th inst., foundation stones were laid of a new Primitive Methodist school in Third-avenue. The school will accommodate 300, and the estimated cost, including the land, is 2,200*l.* The architect is Mr. J. B. Thornley, Darwen.

WORKHOUSE EXTENSION, CHELSEA.—The work in connexion with Chelsea Workhouse extension, of which the foundation-stone was laid on the 8th inst. by Mr. Jeffery, the Chairman of the Chelsea Board of Guardians, consists in the extension of the three blocks of buildings known respectively as "A," "B," and "C" Blocks, and in certain alterations to the block of buildings known as the Arthur-street Block. "A" and "B" Blocks, each five stories in height, will be extended eastwards to the frontage line of the houses in Sydney-street, and will contain above the lower ground floor level accommodation for aged women and infirm women respectively. The lower ground floor of the former block will contain matron's stores; in the latter block female officers' messroom, recreation-room, &c. The two blocks will be connected by escape bridges, and will have staircases at either end. "C," or the offices block, facing King's-road, will be extended along King's-road, with a return to Sydney-street. On the lower ground floor will be a large relief waiting-room and relieving officers' rooms, &c., with separate entrance from Sydney-street. On the ground floor, with entrance from King's-road, will be the committee-rooms and waiting-room, and on the first floor the boardroom, waiting-rooms, &c. The committee-room and boardroom are at present situated in "A" and "B" Blocks respectively, and the space occupied by them will eventually be used by aged women and infirm women. The alterations to the Arthur-street Block will consist in the removal of two old and badly arranged staircases, thereby dividing the Arthur-street Block from the master's house block, which are at present connected at right angles; connecting bridges will also be formed between the two blocks thus divided, and a new staircase, lavatories, &c., will be erected in the Arthur-street Block to replace the staircases, &c., removed. The contractor for the work is Mr. Charles Wall, of Upcerne-road, S.W., and the contract amount is 32,825*l.* The quantity surveyors are Messrs. Northcroft, Son, & Nicholson, of Regent-street, W. The architects are Messrs. M. J. Lansdell & E. J. Harrison, of Basinghall-street, E.C.

ROMAN CATHOLIC CHURCH, BLAYDON.—A new Roman Catholic church is shortly to be erected, at an approximate cost of 7,000*l.*, upon a site abutting Shibdon-road, Blaydon. Plans have been prepared by Mr. C. Walker, architect, Newcastle, showing a stone structure 136 ft. long, and 31 ft. wide, affording accommodation for about 800 worshippers. A presbytery will likewise be erected. The church will comprise the main chancel, two side chapels, and organ gallery.

VARIETY THEATRE, DUNDEE.—On the 10th inst. Bailie Melville had before him an application from Mr. J. M. Creighton, manager of the Gaiety Theatre Company, Ltd., Dundee, for the necessary magistrates' licence for the new hall in Victoria-road. The architect is Mr. Alexander. The auditorium is horse-shoe in form, and it affords accommodation for about 1,500 persons. The proscenium is 24 ft. in height; its width is 23 ft., and the stage has a depth of 20 ft. The stalls are seated for 100 persons; while the pit is capable of accommodating 400 persons. Above is the family circle. On the highest level are the amphitheatre and gallery, seated for 600. In addition to the parts of the auditorium mentioned, four boxes, two on each side, one on the family circle and one on the gallery level, are provided. Entrances and exits are afforded in Victoria-road and in the lanes abutting on either side of the theatre.

PUBLIC SCHOOL, LOCHWINNOCH, RENFREWSHIRE.—Preparations are in progress for erecting a new public school for Lochwinnoch. The site is on the rising ground to the north of Calder Glen-road. The school will accommodate 600 scholars, exclusive of hall, which will accommodate sixty, and the plan is so arranged that additional classrooms can be added when required. The cost of the building, including site, will be about 10,000*l.* The architect for the Board is Mr. C. Davidson, of Paisley.

SCHOOL OF COOKERY, NEWCASTLE.—A school of cookery has been erected at Newcastle, in the Northumberland-road, for the Technical Education Committee. Mr. Dyson is the architect and Mr. Edwin Thomas George, of Newcastle, is the builder. Whilst excavating the 10 ft. for the basement a bed of running sand was discovered—the site crosses that of an old burn, and further excava-

tions to the depth of 27 ft. below the level of the roadway were necessary. The eastern wall of the offices next door was underset by the School Board, and the foundations of the school were made safe by a liberal use of steel rails interlaced in the heavy concrete, specially heavy concrete buttresses being put in at corners where the weight was heaviest. There is a basement with stores and larders, and a room, reached from the main entrance *vid* the area, where students may store cycles and motor-cars. On the first floor front is a large room fitted with ranges—coal and gas—for public cookery demonstrations by the heads of the schools, and entrance is gained by a doorway free from the rest of the apartments. The whole of the apartments of the three floors are connected by corridors running along the eastern extremity of the building, and the corridors are coupled up by a staircase arrangement from floor to floor. There is a special demonstration-room with gallery at the rear of the building on the ground floor. This is for the children from the schools of the city. In the front of the building there are apartments for the principal and assistants, and higher up are bedrooms, principally for those students who are in residence under scholarships. All the main apartments are wainscoted with glazed bricks. The sub-contractors are:—Plumbing, Mr. M. Charlton; plastering, Mr. John Chapman; painting and staining, Mr. James Small; slating, Mr. John Hewitson.

## *FOREIGN.*

FRANCE.—The jury of the Ecole des Beaux-Arts charged with the Prix Chenavard has awarded the prize to M. Hébrard, pupil of M. Scellier de Gisors. The subject was "Projet d'Ecole Spéciale Militaire."——In the gallery of the Bibliothèque Nationale known as the "Chambre de Mazarin" a fine tapestry has just been placed, executed at the Gobelins manufactory. It is after a picture by Enrmann, and represents the great artists of the Italian Renaissance grouped around the central figure of Lorenzo di Medici.——A committee has been formed at Paris to offer to the United States Government a bronze bust of Washington, to be executed after the plaster model by David d'Angers.——The theatre at Lille, built about 1785 from the designs of Lequeux, has been destroyed by fire.——Important works are to be commenced at Biarritz for the improvement of the old port and of the Côte des Basques, at a cost of 300,000 fr. ——The town of Epinal is about to erect a monumental fountain surmounted by a statue of Joan of Arc.——The Municipality of Oran has voted a sum of 1,000,000 fr. for a new municipal theatre.——The death is announced, at the age of thirty-eight, of M. Jean Alfred Marioton, the painter, a pupil of M. Gérôme, M. Bouguereau, and of his brother M. Claudius Marioton. He had obtained a second Prix de Rome, and had devoted himself to decorative painting. His works adorn a great number of private houses in Paris.——The death also is announced, at the age of forty-six, of M. Henri Fouquet, the sculptor, two of whose works were purchased by the city of Paris. His group entitled "Drame au Désert" has been placed in the Square Cambronne. He had obtained medals in the Salons of 1885, 1889, 1893, and 1900.

## *MISCELLANEOUS.*

CRYSTAL PALACE ENGINEERING SCHOOL.—The "Wilson" premium for the best paper read before the Crystal Palace Engineering Society during the present session has been awarded by the Council to W. L. M. Thomas for his paper on "Light Railways." Other papers read during the session were "The Uganda Railway," by J. F. Leyland; "The Improvements at Dover Harbour," by H. O. H. Etheridge; and "Aerial Railways," by A. Colman. An address was also given by Mr. A. T. Walmisley, M.Inst.C.E., Engineer to the Dover Harbour Board, on "The Advantages of the Study of Geometry." The premium was presented to Mr. Thomas by Sir George Barclay Bruce, Past-President of the Institution of Civil Engineers, honorary member of the Society of Engineers, on the occasion of the ninety-first distribution of certificates at the school on April 8.

THE SANITARY INSTITUTE.—At an examination in Practical Sanitary Science, held in Birmingham on April 3 and 4, two candidates presented themselves, and one certificate was granted, *i.e.*, to Mr. Maurice Malins. At an examination for Inspectors of Nuisances, held in Birmingham, on April 3 and 4, seventy-three candidates presented themselves, and thirty-five candidates were certified, as regards their sanitary knowledge, competent to discharge the duties of Inspectors of Nuisances under the Public Health Act, 1875.

THE CREWE COLLECTION OF BLAKE'S WORKS.—Messrs. Sotheby sold the eighteen lots from the Earl of Crewe's collection of Blake's original drawings for a total of 9,775*l.* 5s. a few days ago. Mr. Quaritch secured for 5,600*l.* the "Illustrations of the Book of Job, invented and engraved by William Blake," 1825, published by the author at No. 3, Fountain-court, Strand, and consisting of twenty-two brilliant proof impressions on India paper and the twenty-one original designs in colours. Gilchrist records in his "Life" of Blake that the latter sold the collection to Mr. Butts, from whom it was bought by Monckton Milnes (Lord Houghton). Mr. A. Jackson gave 1,960*l.* for the twelve coloured drawings, 6¾ in. by 5 in. (reputedly unpublished), for "L'Allegro" and "Il Penseroso," with text of the two poems and MS. explanations of the designs. The other lots included "The Marriage of Heaven and Hell," twenty-seven plates, original issue, 260*l.* (Osmaston); "Europe, a Prophecy," 1794, seventeen plates, richly coloured, 203*l.*; "America, a Prophecy," 1793, a copy of the extremely rare original issue, with plates numbered 1 to 16, and a frontispiece without text, 295*l.*; "The Book of Urizen," 1794, the original issue, containing twenty-seven plates of the most remarkable kind, richly coloured and heightened with gold leaf, 307*l.*; and "Songs of Innocence and Experience, showing the Two Contrary States of the Human Soul," 1818, with the first, second, and third titles, fifty-four coloured plates, 12mo. shape, a very rare specimen in that fine condition, 300*l.* (Quaritch).

BOOK SALES.—The following works upon art, topography, and kindred subjects have recently been sold by auction at Messrs. Hodgson's: The original MS. of J. A. Symonds's "Life of Michelangelo Buonarotti" (1891), with the plates as issued with the book, 10*l.* 15s.; D. G. Rossetti's "Sir Hugh the Heron," 1843, privately printed at G. Polidore's Press, with an autograph letter, 35*l.* 10s., and "Poems," privately printed, 1869, 26*l.*; W. Morris's "Story of the Glittering Plain," Kelmscott Press, 1891, 16*l.*, and "Story of Gunnlang the Worm-tongue and Raven the Skald," 1891, printed at the Chiswick Press, but not published, one of three copies on vellum, 42*l.*; "Euclid," printed by Ratdolt at Venice in 1482, a fine copy of the first work, with diagrams, 31*l.*; R Hakluyt's "Principal Navigations, Voyages, Traffiques, and Discoveries of the English Nation," 1599-1600, 28*l.* 10s.; Louis Fagan's "History of Engraving in England," 1893, in three volumes, atlas folio size, with 100 typical examples reproduced from rare prints in the British Museum, one of fifty copies, 12*l.*; and Mrs. John Frankau's "Eighteenth Century Colour Prints," 1900, 17*l.* 10s., and "John Raphael Smith," 1902, 27*l.* 10s. At Messrs. Puttick & Simpson's: J. Papworth's "Select Views of London and the Environs," 1799, with coloured plates by Rowlandson, 22*l.*; Ackermann's "Public Schools," 1816, with coloured plates, 19*l.* 10s.; and "The Roadster's Album," 1845, with coloured plates, 39*l.* At Messrs. Sotheby's: Ince and Mayhew, "A Universal System of Household Furniture," with ninety-five plates, 19*l.* 5s.; "The Golden Legend," Kelmscott Press, 1892, 10*l.* 10s.; Boydell's "History of the River Thames," 1794-6; a grangerised copy, with 900 additional illustrations, bound in green morocco by the Guild of Women Binders, 101*l.*; William Blake's "Book of Job," twenty-one proof-plates, in the original wrapper, 14*l.*; Lipscombe's "Buckinghamshire," 1847, 18*l.* 5s.; Malton's "London and Westminster," 1792, 11*l.* 5s.; Ruskin's "Modern Painters," five volumes, 1848-60, 14*l.* 15s.; Ackermann's "Microcosm of London," 1811, with coloured plates by Pugin and Rowlandson, 23*l.*; a very fine copy of the beautifully illustrated book on art work, by J. P. Bergomensis, "De Plurimis Claris Selectisqz (*sic*) Mulieribus Opus . . . ." 1497, Ferrara, 30*l.* 10s.; W. H. Pyne's "Royal Residences," 1819, 17*l.*; and Ackermann's "Oxford" and "Cambridge," 1814-5, 30*l.* 10s.

ROYAL ORTHOPÆDIC HOSPITAL.—It is stated that the Governors of the hospital have disposed of their site in Oxford-street and Hanover-square, having let it upon a lease for ninety-nine years at an annual rent of 1,400*l.* with an option of acquiring the freehold for 40,000*l.* within three years from now, and that Mr. Walter Emden has been appointed architect for new hospital buildings. The Governors have taken from the Duke of Bedford a lease of a site at the corner of Herbrand-street and Coram-street, North Bloomsbury, at an annual rent of 500*l.* after the end of next year. It seems, however, that upon the ratification of negotiations for union of the two institutions which they have opened with the National Orthopædic Hospital, the interest in the site in Coram-street will be disposed of. If the union is effected, it is intended to erect a hospital for a hundred beds in the northern suburbs as a country branch, and to establish a joint central hospital on and adjoining the site of the buildings of the National Orthopædic Hospital in Great Portland-street, Marylebone. The King's Hospital Fund almoners are prepared, we read, to make a liberal subsidy in aid of the contemplated amalgamation.

THE NEW INFIRMARY FOR MANCHESTER.—Now that the trustees of the Manchester Infirmary have signified their approval of the sale of the Piccadilly site and the acquisition of Stanley-grove for building purposes, no time will be lost in undertaking the various matters that must precede the building of the new infirmary. The arrangements with the Corporation for the purchase by the city of the land in Piccadilly and with the Council of Owens College for the transfer of the Stanley Grove estate, will, it is expected, shortly be completed. The Board of Management do not propose to have an open competition in plans. Such a proceeding, they hold, would probably deprive them of the assistance of some of the best architects in the country. All architects will, however, have the opportunity, in the first instance, of being placed upon the Board's list, and the Board will select from the applications the names of eight or ten architects or firms of architects, and these will be commissioned to prepare plans for a new Infirmary on the Stanley-grove site. All the plans will be paid for, and the Board will be at liberty to select from them those which appear to be most suited to modern requirements. — *Manchester Guardian.*

STRAND AND HOLBORN IMPROVEMENT.—In the case of the claim by Messrs. Dent & Hellyer, sanitary engineers, Newcastle-street, against the London County Council for 60,000*l.* for the compulsory acquisition of their property by the latter for the purposes of the Strand and Holborn improvement scheme — which claim came before Mr. Ralph Clutton as sole arbitrator at the Surveyors' Institution—a consultation took place between counsel, with the result that the Council agreed to pay to the claimants the sum of 37,500*l.*, Messrs. Dent & Hellyer remaining in possession until the last day of September of the present year.

INTERNATIONAL FIRE EXHIBITION, 1903.—We have been asked to state that architects who have designed fire stations are requested to communicate with Mr. F. R. Farrow, of 29, New Bridge-street, E.C., not later than Saturday, April 25, with the view of the possible exhibition of perspectives, elevations, photographs, or plans of modern stations in the architectural group of the impending International Fire Exhibition at Earl's Court.

PROPOSED RESTORATION OF CULROSS ABBEY.—A meeting of those favourable to the proposal to restore Culross Abbey, which was founded in 1217 by Malcolm, Earl of Fife, but which, after passing through strange vicissitudes, is now represented only by the choir of the original building, was held in the Society of Arts Hall, George-street, Edinburgh, on the 9th inst. A scheme of restoration has been prepared by Sir R. Rowand Anderson, and it is estimated that the restoration will cost 5,000*l.* Of that sum the heritors have offered to pay 2,000*l.*, and, with a view of raising the remaining portion, committees are being formed in Culross, Edinburgh, and Glasgow. A committee of seven gentlemen, with Mr. Thomas Aitken, Edinburgh, as convener, was afterwards formed.

MEMORIAL BRONZE, CHURCH OF ST. MARY, UPOTTERY, DEVONSHIRE.—A large bronze has just been erected upon the north side of the parish church of St. Mary, at Upottery. It has been placed there by the present Viscount Sidmouth to the memory of the Right Honourable Henry Addington, Viscount Sidmouth, born May, 1757, Speaker of the House of Commons 1789-1801, and Prime Minister, 1801-1804. The bronze has been made and erected by Messrs. Harry Hems & Sons, Exeter.

ARCHÆOLOGICAL DISCOVERIES IN GREECE.—Professor Furtwaengler, the German archæologist, in the course of his excavations in Orkhomenos, in the province of Boeotia, has discovered vases, it is stated, bearing inscriptions in a character exactly similar to that of the inscriptions which Sir John Evans discovered in his excavations at Knossos, in Crete.

WINDOW, TALLAND CHURCH.—A three-light window has been placed in the east end of Talland Parish Church as an Easter offering. The Crucifixion of the Saviour is the subject of the central light, and on either side are the Blessed Virgin and St. John respectively. The windows are the work of Messrs. Chater & Sons, London.

RESERVOIR, BURY, LANCASHIRE.—The ceremony of cutting the first sod in connexion with the construction of a new reservoir for the Bury and District Joint Water Board took place on the 8th inst. The site is between the Calf Hey and the Holden Wood reservoirs already owned by the Board in the valley at Haslingden Grane. Grane village, which is now depopulated, is on the site of the reservoir, which is to contain 280,000,000 gallons. The contracts amount to 104,626*l.*, and seven years is the period allowed for completion. Messrs. W. & J. Foster, of Bingley, are carrying out the contract for construction. Mr. Cartwright is the Board's engineer.

## *CAPITAL AND LABOUR.*

PAINTERS' DISPUTE AT SOUTHPORT.—On Thursday, April 9, about 250 painters in Southport came out on strike. In October the masters gave notice of a reduction of hours in winter, that during November, December, and January work should be 8 to 4, with half an hour for dinner, and Saturdays 8 to 12; during the first fourteen days in February 8 to 5, with half an hour for dinner, and on Saturdays 8 to 12; full time to commence on February 15. The boundaries were to be one mile from the Southport Town Hall for Southport masters, and one mile from the Birkdale Town Hall for Birkdale masters, and it should be optional to pay wages at the jobs on the respective shops. The men offered to accept the change provided the masters reduced the mile boundary from the shops, beyond which boundary men were paid for the time occupied in walking to a job, to half a mile, and that the men should always be paid at the shop. To this the masters said they could not agree. At the masters' meeting on the 9th inst. firms representing 270 operatives were represented, and it was agreed to stand firm to the terms agreed upon. At present 250 men are receiving strike pay, and about 100 are

at work. The strike has come at an inopportune time, as work is now brisk, and most operatives can earn from 35s. to 2*l.* 5s. per week (with overtime). Strike pay will not amount to more than 15s. per man.

STONEMASONS' DISPUTE, NEWCASTLE AND DISTRICT.—A meeting of the stonemasons employed in the building trades of Newcastle, Gateshead, and Gosforth was held on the 14th inst. at the King's Head Hotel, Newcastle, to consider the present aspect of their dispute. The officials declined to give the Press any information, but we learn from an unofficial source that the decision come to was to the effect that the men agreed to return to work this morning, the 15th inst., but in the meantime, if some satisfactory arrangement was not come to during the course of the day, they will at once cease work, and come out on strike. Therefore the request of the employers to postpone and the threatened notice to terminate work for a week was rejected on the ground that they had had several months to consider the subject. There are about 800 men in the society, but we understand that only some 300 men are affected by the Federation.—*Newcastle Chronicle.*

## *LEGAL.*

### LIGHT AND VENTILATION.

ON Wednesday, last week, at the Lambeth Police Court, the case of the Camberwell Borough Council *v.* Briant was decided. There were two summonses taken out through Mr. Kerslake, sanitary inspector, and the complaint was that there was an absence of light and ventilation to the staircase, and an order was asked for requiring the defendant, Mr. Robert Briant, F.S.I., of 200, Kennington Park-road, the agent of houses in Harris-street, Camberwell, to put a sky-light in the roof of each house.

Mr. H. Courthorpe Munroe, barrister, appeared on behalf of the Council, and Mr. J. P. Easton, of William Easton & Sons, Solicitors, for the defendant.

The Council called, amongst other witnesses, five doctors, viz.: Dr. Stevens, their Medical Officer of Health; Dr. Wm Heaton; Dr. J. C. Jackson, Medical Officer for Fulham; Dr. Wm. Stone; and Dr. E. C. Bousfield, Bacteriologist to the Camberwell Council.

For the defence, Dr. Wm. Lansdale, D.P.H., Dr. Oldfield, and Mr. Robert Briant were called, and, after adjourning the matter for consideration and a personal view, the magistrate, Mr. Hopkins, delivered the following judgment:—

He said the cases of which this was a type were not very uncommon incidents of the constant struggle on the part of the Local Authorities to keep London healthy and sanitary according to advancing modern ideas, but the question raised was very difficult, and he hoped they were in a fair way of getting it authoritatively settled by the High Court. In form the summons was to obtain an order to abate a nuisance, but in substance the contest was whether the owner of a house built long prior to the passing of the Public Health (London) Act could be compelled to make a structural alteration in it to the extent of putting a skylight in the roof for the purpose of lighting and ventilating a staircase and landing alleged to be dark and unventilated. He had been favoured with the views of eminent scientific gentlemen upon the condition of the houses, with particulars of the carbonic acid proportion in samples of air taken within and without, with particulars of air stagnation, and finally he had himself visited the property. The houses under the defendant's control were tiny houses in a mean street. They were in very good order and repair, and were, perhaps, exceptionally well cared for for such property. They consisted of four living rooms, two on the ground and two on the first floor, and in the middle of the house, entered from the ground-floor passage, was a straight staircase, the sides of which ran right up to the ceiling lines of the first floor. On the floor line of the first floor was a tiny landing off which on left and right two doors opened into the two first-floor rooms. Doors and windows being all open there was light and circulation and ventilation, and draught enough and to spare. When the doors and windows were shut the staircase was rather dark, and was apt to become stuffy when the top room doors were continuously shut, and the Council asked for an order to abate the nuisance alleged to arise from that rather dark and stuffy staircase. They said that could be done by putting a skylight in the roof at a cost of 4*l.* for each house. He thought the work might be so done as to effect an improvement in the premises as regarded light and air, but he had to consider whether that improvement could be made compulsory. He had always thought that there was no magic in the words "structural alteration," and that everything depended upon whether, as a fact, the premises were in such a state as to be a nuisance or injurious or dangerous to health. If so, he had always thought that an order to abate the nuisance or the danger must follow, whether that order involved a structural alteration or not; and he had, in his time, made or refused several such orders, according as he had been satisfied or not with the evidence in that particular. In this case he was of opinion that the premises were not in such a state as to be a nuisance within any meaning of the word "nuisance," as used in the Public Health Acts, that he was aware of. He was also of opinion that these premises were not in such a state as to be injurious or dangerous to health. It seemed to him that the worst that could be said against them was that they gave to tenants who were careless about letting into their rooms such bad air as London afforded an opportunity of living in a more stuffy atmosphere than was good for them according to modern ideas. He was of opinion that the tenants could themselves use these premises in such a way as would entirely negative all the evidence given by the Council as to the danger of injury to the health of the tenants. It followed that he was not prepared to make the order asked for, and that he must dismiss the summons. As scientific evidence was called on both sides, he should allow the defendant 5*l.* 5s. costs.

## PATENTS OF THE WEEK:

### APPLICATIONS PUBLISHED.*

6,763 of 1902.—H. LACHINAL: *Means for Operating Window Blinds, Shutters and the Like.*

Means for operating blinds, shutters, and the like, consisting of a transmission mechanism with universal joints, combined with an actuated device controlling a system or series of abutments for checking a movement produced by the weight of the blind or shutter when on cessation of operation said transmission mechanism has been released.

6,779 of 1902.—E. F. WARD: *Chimney or Ventilating Shaft Top.*

This consists in a chimney or ventilating shaft top consisting of an outer tube with an opening or openings in the side communicating with a smaller tube or enclosed passage upwards within the outer tube.

8,845 of 1902.—C. J. MALINGS: *Draught and Dust Excluders for Doors and the Like.*

Draught and dust excluders, consisting in the combination with a casing fitted in a groove, or otherwise attached to a door of a weather strip in said casing, secured in a metal binder or trough; a bar mounted in said casing above the weather strip, a spring arranged at one end of said bar, and means such as toggles, pawls, links, inclined surfaces, or the like, whereby a longitudinal motion of said bar causes the weather strip to emerge from the casing and so close the interstitial space between the casing and the door.

9,763 of 1902.—E. GLOVER: *Metal Casements or Hinged Windows.*

In that class of metal casements or hinged windows turned on vertical pivots in the same vertical plane as the window frame, making the fixed and hinged parts of the top and bottom bars with male and female pivots or horizontal turntables of special construction.

11,432 of 1902.—R. LEGGOTT and W. R. LEGGOTT, LTD.: *Sliding Bolts for Securing Doors and the Like.*

In carrying out this invention, a suitable plate frame is formed for attaching to the door or the like; the said plate is prepared with a long recess on the face side, and in this recess a lever is mounted on a fulcrum pin, beyond which the sliding bolt is mounted between suitable guides forming part of the plate frame. Connected to the sliding bolt are a number of projecting arms, so placed that, on operating the before-mentioned lever in either direction, the sliding bolt is actuated accordingly, and when the lever is in its normal position, laying within the recess, the arms of the lever are parallel with the axis of the sliding bolt, forming props to the bolt in such a manner that the said bolt is locked in the position corresponding to that of the lever. In the before-mentioned recess, in order that the lever may be retained in the recess, and the unlocking of the sliding bolt prevented, one or more stops controlled by springs may be applied so to come in contact with the internal arms of the lever, and thereby retain the lever and sliding bolt in their required position.

9,576 of 1902.—J. SHANKS: *Water Closets.*

A water closet having its side walls near the top of the basin curving inwards so as to form a comparatively large shoulder part on each side, the side walls extending more or less vertically downwards from the shoulder, and arranged so that the breadth of the basin below the shoulder is practically the same as the width of the discharge; the front portion of the basin sloping from the rim to the outlet leading to the trap bend.

25,971 of 1902.—J. C. WEGERIF: *Mills for Grinding*

A pan or roller mill in which the grinding rollers as well as the pan are positively driven, and have their axes mounted non-radially to the pan axis in bearings directly loaded with yielding pressure and fitted to slide in vertical guides.

6,945 of 1902.—W. ROYLE (P. E. Monnerat): *Machines for Levelling and Cultivating Land, and Excavating, Embanking, and Lifting Earth.*

A ground scraper or cultivating apparatus, consisting of a scraper, a frame carrying the scraper having two members at right angles to each other and runners upon each member, and connexions from the extremities of the frame to drawing engines at front and rear, the frame being adapted to travel in either direction, and to be upset on the end of each travel.

11,242 of 1902.—J. H. PLACE & SONS, LTD., and W. H. PLACE: *Waste-pipe Protector Block for Sinks and the Like.*

A protector block or junction, for the waste-pipes of sinks and the like, provided with a trap or gully externally thereof.

28,718 of 1902.—W. C. LYON: *Metallic Matrices or Skeletons for Strengthening Blocks of Artificial Stone and the Like.*

Means of connecting the main rods or wires of a matrix designed for use in building blocks or slabs, with the tie wires, the same consisting in a casting of lead or other soft metal, said casting being provided with a depending lug or projection.

1173 of 1903.—R. GARDNER: *Abrading Blocks and Mountings therefor.*

An abrading surface comprising a series of spaced, independently removable abrading sections extending radially, each section having an increased operating face towards its outer end, the vertical faces of each section being at right angles to the operating face.

1174 of 1903.—R. GARDNER: *Abrading Blocks and Mountings therefor.*

An abrading tool comprising the combination of a suitable carrier and a plurality of abrading blocks, resembling approximately a triangular-shaped cored body.

1,209 of 1903.—J. F. RIDING: *Heating and Humidifying Apparatus for Greenhouses, Dwelling-houses, Cotton Mills, and Other Places where Heat or Moisture is Required.*

This consists in the combination of endless pipes, a cylinder or cylinders connected therewith, said cylinder or cylinders consisting of a water casing surrounding tubes, which are arranged to cross each other either horizontally or diagonally or placed vertically and united to the water casing, an adjustable heating device supported by balance-weights and water supply and overflow pipes for said water casing.

1,813 of 1903.—C. TAYLOR: *Gullies or Traps for Drains.*

This consists of one or more receivers for waste water placed at the side of the ordinary grid, and an additional grid placed under said ordinary grid in such a position that the waste water will pass through the additional grid to the drain without first passing through the ordinary grid.

11,892 of 1902.—H. W. CHUBB: *Locks for the Doors of Safe-Deposit Lockers or Cupboards and the Like.*

Means for attaching a lock to and detaching it from a door, consisting of guides fixed to or formed in the door between which the lock can be slid into or out of position, and devices for retaining the lock in place between the said guides and for releasing it.

13,411 of 1902.—THE STEEL NUT AND J. HAMPTON, LIMITED, AND J. HAMPTON, SENIOR: *Carpenters' Bench Stops.*

This consists in making the body or fixed part of the stop which is secured to the bench, in the ordinary way, of a box-like form, and combining therewith a coiled spring for the leg of the adjustable part or stop proper to seat itself on and so connecting the stop proper to the box-like body by means of a screw, that when the screw is turned in one or other direction, the stop proper is raised by the spring or depressed by the head of the screw against the action of the said spring.

24,226 of 1902.—A. GUYOT: *Taps or Cocks.*

A tap or cock for water, steam, or other fluid under pressure, characterised in that the valve thereof is provided with a pivot passing with considerable friction within a socket or bearing formed in the end of the controlling stem, which passes through a shouldered cap screwed into the casing or body of the tap.

24,455 of 1902.—WAYGOOD & OTIS, LTD. (Otis Elevator Co., Incorporated): *Controlling Devices for Electric Motors, applicable to the Motors of Elevators and the Like.*

This invention consists primarily of means for changing the speed of a motor in accordance with the load before stopping, and so that the speed of a motor may be automatically reduced before stopping, by an amount proportioned to the load.

1,277 of 1903.—W. STEGER: *Weather Strips.*

The object of the present invention is to improve the construction of that class of weather strips having a slidable strip fitted in a recess of the bottom edge of the door, and capable of upward and downward movement as the door opens and closes, and to enable such parts to be entirely constructed of metal, whereby warping and twisting are prevented. This consists of a metallic hood designed to be arranged within a recess of a door, and provided at the top with interior recesses formed by upsetting the metal, and having inclined faces, springs having their upper end set at an angle and secured to the said inclined faces, whereby

* All these applications are in the stage in which opposition to the grant of Patents upon them can be made.

the springs are adapted to be flexed or bent transversely, the slidable weather strip being connected with the springs.

2,094 of 1903.—L. JÜRDENS: *Door Lock and Fastening with Alarm Device.*

This consists in the combination with the usual bolt, a blade spring fixed to the rear surface of the bolt, the free end of said spring being bent upwards, a contact piece fixed to said blade spring, a second blade spring fixed to the upper wall of the casing and extending downwardly, and a contact piece fixed to said second blade spring.

## MEETINGS.

SATURDAY, APRIL 18.

*Edinburgh Architectural Association.*—Visit to Edinburgh of the Glasgow Architectural Association, where a number of buildings will be inspected.

*St. Paul's Ecclesiological Society.*—Visit to the Church of St. Giles, Cripplegate. Meeting in the church at 2.30 p.m.

MONDAY, APRIL 20.

*Royal Institute of British Architects.*—Mr. Edwin T. Hall on "Four Modern Hospitals." The paper will be illustrated by working and detail drawings. 8 p.m.

*Surveyors' Institution.*—Mr. H. Trustram Eve on "Modern Methods of Valuation of Manurial Residues." 4 p.m.

*Edinburgh Architectural Association.* — Visit to Manderston Estate.

TUESDAY, APRIL 21.

*Institution of Civil Engineers.*—Mr. J. T. Milton and Mr. W. J. Larke on 'The Decay of Metals." 8 p.m.

*Builders' Clerks' Benevolent Institution.* — Twenty-fifth Annual Dinner, King's Hall, Holborn Restaurant, 6.30 p.m.

*Glasgow Architectural Association.*—Paper by Mr. A. Hessell Tiltman. 8 p.m.

WEDNESDAY, APRIL 22.

*Edinburgh Architectural Association.* — Annual Business Meeting and President's Valedictory Address.

*Eastern Counties Master Builders' Federation.*—Council meeting at 3 p.m., and annual general meeting at 3.30 p.m., at the Cups Hotel, Colchester.

THURSDAY, APRIL 23.

*Royal Institution.*—Professor Dewar, M.A., on "Hydrogen: Gaseous, Liquid, and Solid." I. 5 p.m.

*Institution of Mechanical Engineers.* — Anniversary Dinner.

*Institution of Electrical Engineers.*—1. Adjourned discussion on paper by Mr. A. D. Constable and Mr. E. Fawssett on "Distribution Losses in Electric Supply Systems," and Mr. M. B. Fields' paper on "A Study of the Phenomenon of Resource in Electric Circuits by the Aid of Oscillograms." 2. (If time permit.) Mr. W. Aitken on "Divided Multiple Switchboards: An Efficient Telephone System for the World's Capitals." (The announcement of the Council Nominations for the Council of 1903-4 will be made at this meeting.) 8 p.m.

*Society for the Encouragement of the Fine Arts.*—Mr. H. Beaumont on "Ruskin's Bible of Amiens" (with lantern illustrations). 8 p.m.

FRIDAY, APRIL 24.

*Institution of Civil Engineers (Students' Meeting).*—Mr. H. S. Watson on "Bacterial Sewage-Disposal Works at Ash, Dover." 8 p.m.

*Royal Institution.*—Hon. R. J. Strutt, M.A., on "Some Recent Investigations on Electrical Conduction." 9 p.m.

*Institution of Mechanical Engineers.*—1. President's Address. 2. Professor W. E. Dalby on "The Education of Engineers in America, Germany, and Switzerland." 8 p.m.

*Junior Institution of Engineers* (Westminster Palace Hotel).—Mr. R. W. Newman on "The Effect of Design on Methods of Construction, from a Contractor's Point of View." 8 p.m.

SATURDAY, APRIL 25.

*Royal Institution.*—Professor Langton Douglas, M.A., on "The Early Art of Siena." I. 3 p.m.

## SOME RECENT SALES OF PROPERTY:

### ESTATE EXCHANGE REPORT.

April 6.—By MIDDLETON & CRACKNELL.

Hampstead.—10, Prince Arthur-rd., u.t. 51 yrs., g.r. 30*l.*, e.r. 160*l.* ..... £1,600

By THOMAS, PEYER, & MILES.

Uffculme, Devon.—The Uffculme Brewery, with 22 tied houses, f. ..... 20,600

Mount View and 37 a., f., p. ..... 3,000

Ockley, Surrey.—The Red Lion Hotel and 2½ a., the letting on 21 yrs. free lease, at per annum (including goodwill and possession) ..... 150

By VENTOM, BULL, & COOPER.

Houndsditch.—Nos. 58, 59, 60, and 61A, area 4,000 ft., building lease for 80 yrs., let at per annum ..... 395

City of London.—87 and 88, Tower Hill, area 2,100 ft., building lease for 80 yrs., let at per annum ..... 160

By WEATHERALL & GREEN.

Clapton.—4, Clapton Common, f., y.r. 120*l.* ..... 2,650

Hounslow, Middx.—Jersey Villas, f.g.r.'s 39*l.* 4s., reversion in 44 yrs. ..... 1,140

By WINKWORTH & CO.

Belgravia.—40 and 41, Wilton-cres., profit rentals of 405*l.* for 1¼ yrs. and 260*l.* for 19¼ yrs. ..... 2,175

13, Wilton-place, u.t. 19 yrs., g.r. 6*l.* 6s., y.r. 185*l.* ..... 1,800

April 7.—By DEBENHAM, TEWSON, & CO.

Holloway.—90, 92, and 94, Drayton Pk., u.t. 73 yrs., g.r. 24*l.*, y.r. 112*l.* ..... 1,105

4, Stavordale-rd., u.t. 73 yrs., g.r. 8*l.*, y.r. 45*l.* .. 450

Notting Hill.—37, Ladbroke-sq., u.t. 35 yrs., g.r. 40*l.*, p. ..... £780

By DAVID BURNETT & CO.

Manor Park.—96, 98, and 136, Third-av., f., w.r. 71*l.* 10s. ..... 530

Dersingham-av., plot of land, f. ..... 195

Ilford.—7 and 8, Grove-cottages, f., w.r. 31*l.* 4s. ..... 295

By HAMPTON & SONS.

Cockayne Hatley, Beds.—The Cockayne Hatley Estate, 1,540 acres, f., including the manor and advowson ..... 34,100

By HOLCOMBE, BETTS, & WEST.

Camden Town.—67, St. Augustine's-rd., u.t. 60 yrs., g.r. 10*l.*, y r. 52*l.* 10s. ..... 500

Marylebone.—84, High-st., u.t. 6 yrs., g.r. 25*l.*, y.r. 120*l.* ..... 600

18, Paddington-st., u.t. 6 yrs., g.r. 20*l.*, y.r. 55*l.* ..... 120

23, Nottingham-st., u.t. 21¼ yrs., g.r. 10*l.*, y.r. 80*l.* ..... 800

By J. P. THORNTON.

Shepherd's Bush.—394, Goldhawk-rd., u.t. 86½ yrs., g.r. 10*l.*, e.r. 65*l.* ..... 800

By BOYTON, PEGRAM, & BUCKMASTER (at Walham Green).

Fulham.—24 to 30 (even), Ancill-st., f., w.r. 132*l.* 12s. ..... 1,200

4, Barclay-rd., u.t. 56 yrs., g.r. 7*l.* 10s., w.r. 126*l.* 2s. ..... 720

143, Munster-rd., u.t. 89 yrs., g.r. 6*l.* 5s., e.r. 40*l.* ..... 350

38, Moore Pk-rd., u.t. 63½ yrs., g.r. 5*l.* 10s., y.r. 32*l.* ..... 320

26 to 32 (even), De Morgan-rd., u.t. 92½ yrs., g.r. 20*l.*, w.r. 156*l.* ..... 825

Chelsea.—7 and 8, Gertrude-st., u t. 48 yrs., g.r. 10*l.*, y.r. 84*l.* ..... 790

April 8.—By HARDS & BRADLY.

Millwall.—13 and 15, Newcastle-st., u.t. 38 yrs., g.r. 7*l.* 12s., w.r. 62*l.* 8s. ..... 290

By E. H. HENRY.

Clapham Common.—2 to 5, South-side (S.), u.t. 21 yrs., g.r. 58*l.* 12s., y.r. 314*l.* ..... 2,650

6, South-side, u.t. 21 yrs., g.r. 18*l.*, y.r. 100*l.* .. 1,010

Brixton.—34, Torrens-rd., u.t. 79 yrs., g.r. 7*l.*, y.r. 34*l.* ..... 385

By FRANK JOLLY & CO.

Mile End.—9, 15, and 17, Venour-rd., u.t. 72½ yrs., g.r. 15*l.* 15s., w.r. 124*l.* 16s. ..... 835

*Contractions used in these lists.*—F.g.r. for freehold ground-rent; l.g.r. for leasehold ground-rent; i.g.r. for improved ground-rent; g.r. for ground-rent; r. for rent; f. for freehold; c. for copyhold; l. for leasehold; p. for possession; e.r. for estimated rental; w.r. for weekly rental; q.r. for quarterly rental; y.r. for yearly rental; u.t. for unexpired term; p.a. for per annum; yrs. for years; la. for lane; st. for street; rd. for road; sq. for square; pl. for place; ter. for terrace; cres. for crescent; av. for avenue; gdns. for gardens; yd. for yard; gr. for grove; b.h. for beer-house; p.h. for public-house; o. for offices; s. for shops.

## PRICES CURRENT OF MATERIALS.

*** Our aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

### BRICKS, &c.

| | £ s. d. | |
|---|---|---|
| Hard Stocks .... | 1 15 0 | per 1,000 alongside, in river. |
| Rough Stocks and Grizzles ..... | 1 12 0 | " " " |
| Facing Stocks .... | 2 12 0 | " " " |
| Shippers ..... | 2 5 0 | " " " |
| Flettons ..... | 1 7 6 | " at railway depôt |
| Red Wire Cuts .. | 1 12 0 | " " " |
| Best Fareham Red | 3 12 0 | " " " |
| Best Red Pressed Ruabon Facing | 5 0 0 | " " " |
| Best Blue Pressed Staffordshire .. | 4 5 0 | " " " |
| Do. Bullnose .... | 4 11 0 | " " " |
| Best Stourbridge Fire Bricks .... | 4 8 0 | " " " |
| GLAZED BRICKS. | | |
| Best White and Ivory Glazed Stretchers ..... | 13 0 0 | " " " |
| Headers ..... | 12 0 0 | " " " |
| Quoins, Bullnose, and Flats ..... | 17 0 0 | " " " |
| Double Stretchers | 19 0 0 | " " " |
| Double Headers.. | 16 0 0 | " " " |
| One Side and two Ends ..... | 19 0 0 | " " " |
| Two Sides and one End ..... | 20 0 0 | " " " |
| Splays, Chamfered, Squints ..... | 20 0 0 | " " " |
| Best Dipped Salt Glazed Stretchers and Headers | 12 0 0 | " " " |
| Quoins, Bullnose, and Flats ..... | 14 0 0 | " " " |
| Double Stretchers | 15 0 0 | " " " |
| Double Headers.. | 14 0 0 | " " " |
| One Side and two Ends ..... | 15 0 0 | " " " |
| Two Sides and one End ..... | 15 0 0 | " " " |
| Splays Chamfered, Squints ..... | 14 0 0 | " " " |
| Second Quality White and Dipped Salt Glazed .... | 2 0 0 | " less than best. |
| Thames and Pit Sand ..... | 6 | 9 per yard, delivered. |
| Thames Ballast ..... | 6 | 0 " " |
| Best Portland Cement ..... | 30 | 0 per ton, delivered. |
| Best Ground Blue Lias Lime.. | 21 | 0 " " |

NOTE.—The cement or lime is exclusive of the ordinary charge for sacks.

Grey Stone Lime ..... 10s. 6d. per yard, delivered.
Stourbridge Fire-clay in sacks 27s. 6d. per ton at rly. dpt.

### PRICES CURRENT (*Continued*).

#### STONE.

| | s. d. | |
|---|---|---|
| Ancaster in blocks .... | 1 11 | per ft. cube, deld. rly. depôt. |
| Bath " .... | 1 7 | " " |
| Farleigh Down Bath .. | 1 8 | " " |
| Beer in blocks .... | 1 6 | " " |
| Grinshill " ... | 1 10 | " " |
| Brown Portland in blocks | 2 2 | " " |
| Darley Dale in blocks.. | 2 4 | " " |
| Red Corsehill " | 2 5 | " " |
| Closeburn Red Freestone | 2 0 | " " |
| Red Mansfield " | 2 4 | " " |
| YORK STONE—*Robin Hood Quality.* | s. d. | |
| Scappled random blocks | 2 10 | per ft. cube, deld. rly. depôt. |
| 6 in. sawn two sides landings to sizes (under 40 ft. super.) ..... | 2 3 | per foot super. " |
| 6 in. Rubbed two sides Ditto, Ditto ..... | 2 6 | " " |
| 3 in. Sawn two sides slabs (random sizes).. | 0 11½ | " " |
| 2 in. to 2½ in. Sawn one side slabs (random sizes) ..... | 0 7½ | " " |
| 1¼ in. to 2 in. ditto, ditto | 0 6 | " |
| BEST HARL YORK— | | |
| Scappled random blocks | 3 0 | per ft. cube " |
| 6 in. sawn two sides, landings to sizes (under 40 ft. sup.) ..... .. | 2 8 | per ft. super. " |
| 6 in. Rubbed two sides Ditto ..... | — | " " |
| 3 in. sawn two sides slabs (random sizes) | 1 2 | " " |
| 2 in. self-faced random flags ..... | 0 5 | " " |
| Hopton Wood (Hard Bed) in blocks | 2 3 | per ft. cube. |
| " " 6 in. sawn both sides landings | 2 7 | per ft. super. deld. rly. depôt. |
| " " 3 in. do. | 1 2½ | " " |

#### SLATES.

| in. in. | £ s. d. | |
|---|---|---|
| 20×10 best blue Bangor.. | 13 2 6 | per 1000 of 1200 at ry. dep. |
| 20×12 " " " .. | 13 17 6 | " " |
| 20×10 best seconds " | 12 15 0 | " " |
| 20×12 " " " | 13 10 0 | " " |
| 16×8 best " | 7 0 0 | " " |
| 20×10 best blue Portmadoc .. | 12 5 0 | " " |
| 16×8 best blue Portmadoc | 6 5 0 | " " |
| 20×10 best Eureka unfading green.... | 15 2 6 | " " |
| 20×12 " " | 17 2 6 | " " |
| 18×10 " " | 12 10 0 | " " |
| 16×8 " " | 10 5 0 | " " |
| 20×10 permanent green | 11 0 0 | " " |
| 18×10 " " | 9 5 0 | " " |
| 16×8 " " | 6 10 0 | " " |

#### TILES.

| | s. d. | |
|---|---|---|
| Best plain red roofing tiles.. | 42 0 | per 1,000, at rly. depôt. |
| Hip and valley tiles.... | 3 7 | per doz. " " |
| Best Broseley tiles ..... | 50 0 | per 1,000 " " |
| Do. Ornamental Tiles .... | 52 6 | " " " |
| Hip and valley tiles.... | 4 0 | per doz. " " |
| Best Ruabon Red, brown or brindled Do. (Edwards) | 57 6 | per 1,000 " " |
| Do. ornamental Do. .... | 60 0 | " " " |
| Hip tiles ..... | 4 0 | per doz. " " |
| Valley tiles ..... | 3 0 | " " |
| Best Red or Mottled Staffordshire Do. (Peakes) | 51 9 | per 1,000 " " |
| Do. Ornamental Do. ..... | 54 6 | " " " |
| Hip tiles ..... | 4 1 | per doz. " " |
| Valley tiles..... | 3 8 | " " " |
| Best "Rosemary" brand plain tiles ..... | 48 0 | per 1,000 " " |
| Do. Ornamental Do. .... | 50 0 | " " " |
| Hip tiles ..... | 4 0 | per doz. " " |
| Valley tiles ..... | 3 8 | " " " |

#### WOOD.

| | At per standard. £ s. d. | £ s. d. |
|---|---|---|
| Deals: best 3 in. by 11 in. and 4 in. by 9 in and 11 in..... | 15 10 0 | 16 10 0 |
| Deals: best 3 by 9..... | 14 10 0 | 15 10 0 |
| Battens: best 2½ in. by 7 in. and 8 in., and 3 in. by 7 in. and 8 in..... | 11 10 0 | 12 10 0 |
| Battens: best 2½ by 6 and 3 by 6 .. | 0 10 0 | less than 7 in. and 8 in. |
| Deals: seconds ..... | 1 0 0 | less than best |
| Battens: seconds ..... | 0 10 0 | " " " |
| 2 in. by 4 in. and 2 in. by 6 in. .. | 9 0 0 | 9 10 0 |
| 2 in. by 4½ in. and 2 in. by 5 in. .. | 8 10 0 | 9 10 0 |
| Foreign Sawn Boards— | | |
| 1 in. and 1¼ in. by 7 in. ..... | 0 10 0 | more than battens. |
| ¾ in. ..... | 1 0 0 | " |
| Fir timber: Best middling Danzig or Memel (average specification | At per load of 50 ft. 4 10 0 | 5 0 0 |
| Seconds ..... | 4 5 0 | 4 10 0 |
| Small timber (8 in. to 10 in.) .... | 3 12 6 | 3 15 0 |
| Small timber (6 in. to 8 in.)..... | 3 0 0 | 3 10 0 |
| Swedish balks ..... | 2 15 0 | 3 0 0 |
| Pitch-pine timber (30 ft. average).. | 3 5 0 | 3 15 0 |
| JOINERS WOOD. | At per standard. | |
| White Sea: First yellow deals, 3 in. by 11 in..... | 23 0 0 | 24 0 0 |
| 3 in. by 9 in. ..... | 21 0 0 | 22 10 0 |
| Battens, 2½ in. and 3 in. by 7 in. | 17 0 0 | 18 10 0 |
| Second yellow deals, 3 in. by 11 in. | 18 10 0 | 20 0 0 |
| " " 3 in. by 9 in. | 17 10 0 | 19 0 0 |
| Battens, 2½ in. and 3 in. by 7 in. | 13 10 0 | 14 10 0 |
| Third yellow deals, 3 in. by 11 in. and 9 in. ..... | 15 10 0 | 16 10 0 |
| Battens, 2½ in. and 3 in. by 7 in. | 11 10 0 | 12 10 0 |
| Petersburg: first yellow deals, 3 in. by 11 in. ..... | 21 0 0 | 22 10 0 |
| Do. 3 in. by 9 in..... | 18 0 0 | 19 10 0 |
| Battens..... | 13 10 | 15 0 0 |
| Second yellow deals, 3 in. by 11 in..... | 16 0 | 17 0 0 |
| Do. 3 in. by 9 in. ..... | 14 10 0 | 16 0 0 |
| Battens..... | 11 10 0 | 12 10 0 |
| Third yellow deals, 3 in. by 11 in..... | 10 0 | 14 0 0 |
| Do. 3 in. by 9 in. ..... | 3 0 0 | 14 0 0 |
| Battens ..... | 0 0 0 | 11 0 0 |

[*See also page 423.*

# COMPETITIONS, CONTRACTS AND PUBLIC APPOINTMENTS.

*(For some Contracts, &c., still open, but not included in this List, see previous issues.)*

## COMPETITION.

| Nature of Work. | By whom Required. | Premiums. | Designs to be delivered |
|---|---|---|---|
| Artisans' Dwellings, High Wincobank Estate | Sheffield City Council | 50*l.*, 30*l.*, and 20*l.* | No date. |

## CONTRACTS.

| Nature of Work or Materials. | By whom Advertised. | Forms of Tender, &c., supplied by | Tenders to be delivered |
|---|---|---|---|
| *Painting External Wood and Ironwork, &c. | Kingston Union | Assistant Clerk, Union Offices, Coombe-lane, Kingston-on-Thames... | April 20 |
| Chapel, School, &c., Merthyr Tydfil | Morlais Baptist Church | Rev. E. Aubrey, 22, The Avenue, Merthyr | April 21 |
| Fire and Police Station, Ford Park, Mutley | Plymouth Corporation | J. Paton, Borough Engineer, Municipal Offices, Plymouth | do. |
| Renovation of Tabernacle Chapel, Haverfordwest | The Trustees | A. H. Thomas, Architect, Haverfordwest | do. |
| Eight Workmen's Dwellings, Ravensthorpe, Yorks | Messrs. Marshall & Co., Ltd. | J. W. Burrows, Architect, Birstall | do. |
| Sessions House, Larne, Ireland | Belfast County Council | S. Robinson, Surveyor, Barnhill, Larne | do. |
| C.I.Water,&c.,Mains,Workhouse,Gravelly Hill, B'mn'm | Aston Guardians | C. Whitwell & Sons, Architects, 23, Temple-row, Birmingham | do. |
| Reservoir, &c. | Daventry Town Council | Borough Surveyor, Moot Hall, Dewsbury | do. |
| Workmen's Dwellings, Calder Vale-road, Wakefield | Messrs. Brotherton & Co., Ltd. | Simpson & Richardson, Architects, Southgate, Wakefield | do. |
| Additions to Schools, Northumberland-avenue | Hull School Board | The Architect, School Board Offices, Albion-street, Hull | do. |
| Hall, Headcorn, Kent | Loyal Weald of Kent Oddfellows | Jeffery & Lacey, Architects, 13, North-street, Ashford | do. |
| Road Metal (8,000 tons) | Southampton Corporation | J. A. Crowther, Surveyor, Market Chambers, Southampton | do. |
| Additions to Wesley Chapel, Ebbw Vale, Wales | ..... | R. L. Roberts, Architect, Abercarn | do. |
| *Making-up Roads | Acton District Council | Council's Surveyor, 242, High-street, Acton | do. |
| Surveyor's Materials | Swinton (Lancs) U.D.C. | W. T. Postlethwaite, Council Offices, Swinton | April 22 |
| Rebuilding the Swan Hotel, Blackburn | Brewery Co., Ltd. | J. Bertwistle, Architect, Blackburn | do. |
| Water Mains, &c., Ore | Hastings Guardians | Jeffery & Son, Architects, 5, Havelock-road, Hastings | do. |
| Shelters and Bandstands | Blackpool Corporation | J. S. Brodie, Borough Surveyor, Town Hall, Blackpool | do. |
| Rebuilding the Punch Bowl Hotel, Darwen | Blackburn Brewery Co., Ltd. | J. Bertwistle, Architect, Blackburn | do. |
| Belfry at Church, Craigavole, Co. Derry | Rev. J. M'Guigan | E. J. Toye, Architect, 20, Great James-street, Londonderry | do. |
| Public Library, West Calder, N.B. | The Committee | W. Baillie, Architect, 223, Hope-street, Glasgow | do. |
| Street Works, Mill Cottages | Ramsgate Corporation | Borough Engineer, Albion House, Ramsgate | do. |
| Works at Workhouse Infirmary | Cannock Guardians | Willcox & Raikes, 63, Temple-row, Birmingham | do. |
| House, Baildon, Yorks | ..... | Walker & Collinson, Architects, Swan-arcade, Bradford | April 23 |
| Eleven Houses, Alergate, Durham | ..... | G. Ord, Architect, 16, The Avenue, Durham | do. |
| Sewerage Works | Hipperholme (Yorks) U.D.C. | Walsh & Nicholas, Surveyors, Halifax | do. |
| House, Britannia-road | Ipswich Guardians | H. J. Wright, Architect, 4, Museum-street, Ipswich | do. |
| Bungalow, Grimscar Woods, Huddersfield | ..... | J. Kirk & Sons, Architects, Huddersfield | do. |
| Schools, Great Darkgate-street, Aberystwyth | The Trustees | J. L. Evans, Architect, 21, Great Darkgate-street, Aberystwyth | do. |
| Drainage Works, &c., Balfron, N.B. | Stirlingshire County Council | A. Forbes, 146, Buchanan-street, Glasgow | do. |
| Parochial Residence, Cookstown, Ireland | Canon Rice | E. & J. Byrne, Architect, 4, Waring-street, Belfast | do. |
| *Timber | Director-General Ordnance Survey | Officer in Charge of Stores, Ordnance Survey Office, Southampton | do. |
| Additions to Birks, Sedbergh | Messrs. J. Dover & Sons | S. Shaw, Architect, Highgate, Kendal | April 24 |
| Alterations to Primitive Methodist Chapel, Shildon | ..... | Rev. W. Gelley, 21, Wesley-crescent, Shildon, R.S.O. | do. |
| Four Shops, Warehouse, &c., Horton-street, Halifax | ..... | Walsh & Nicholas, Architects, Harrison-road, Halifax | do. |
| Rebuilding Bridges, &c., Earsdon Well and other places | Northumberland County Council | J. A. Bean, County Surveyor, The Moot Hall, Newcastle | do. |
| Making-up Station-road | Frinton-on-Sea U.D.C. | T. W. Golds, Surveyor, High-street, Frinton | do. |
| Underground Sub-station | Bristol Corporation | R. F. Proctor, City Engineer, Bristol | do. |
| Additions to Hospital | Bowness & Windermere U.D.C. | R. Walker, Architect, Windermere | do. |
| Waterworks | Aspatria (Cumberland) Water Brd. | Pickering & Crompton, Engineers, Whitehaven | April 25 |
| Pier Works, Lintailen, Loch Linnhe | Quarrier Co., Ltd. | Forman & McCall, Civil Engineers, 160, Hope-street, Glasgow | do. |
| Paving Works | Saffron Walden Town Council | A. H. Forbes, Civil Engineer, Borough Surveyor, Saffron Walden | do. |
| Road Metal, &c., near Leeds | Horsforth U.D.C. | R. R. Jones, Surveyor, Council Offices, Horsforth | do. |
| Road Metal, &c. (20,000 tons) | Bradford Corporation | J. H. Cox, City Surveyor, Town Hall, Bradford | do. |
| Additions to Schools, Ely | Cardiff Guardians | E. Seward, Architect, Queen's Chambers, Cardiff | do. |
| Chapel, Pontrhydyfen, Wales | ..... | G. P. Davies, Architect, Port Talbot | do. |
| Alterations to Farm Buildings, Brownhills, Aberdeen | ..... | W. Stewart, Inverurie | do. |
| Drainage Works | Culross (N.B.) Town Council | Kyle, Dennison, & Laing, Civil Engineers, 13, George-st., Edinburgh | April 27 |
| Electric Lighting Plant | Faversham Corporation | Hopkinson & Talbot, 25, Victoria-street, S.W. | do. |
| Conveniences at Docks | Aberdeen Harbour Commissioners | R. G. Nichol, Engineer, Aberdeen | do. |
| School, Abertillery, Mon. | Aberystruth School Board | R. L. Roberts, Architects, Abercarn, Mon. | do. |
| Sewers, &c. | Winchester Corporation | W. V. Anderson, Civil Engineer, Guildhall, Winchester.. | April 28 |
| Chimney Shaft, &c., Torksey | Nottingham County Council | H. Walker & Son, Architects, King-street, Nottingham | do. |
| •Cast Iron Tank, &c., at Canning Town | County Borough of West Ham | Borough Engineer, Town Hall, Stratford, E. | do. |
| Lighthouse Tower, nr. St. Catherine's Point, Cornwall | Fowey Harbour Commissioners | W. T. Douglas, Engineer, 15, Victoria-street, Westminster, S.W. | April 29 |
| Restorationof St. Cuthbert's Church, Kirkby-in-Furness | Committee | J. Standen-Adkins, 3, Maze-road, Kew | April 30 |
| Electrical Plant | Kettering U.D.C. | Kennedy & Jenkin, Engineers, 17, Victoria-srteet, S.W. | May 1 |
| Sewerage Works, Ynisawdre (five contracts) | Penybont (Wales) R.D.C. | Burnett & Hurley, Engs., 10, Bridgend-rd., Tondu, Aberkenfig.Glam. | do. |
| *New Coast Guard Station, Sunderland | The Admiralty | Director of Works Department, 21, Northumberland-avenue, W.C. | do. |
| •Technical Institute and Free Library | Portsmouth Corporation | G. E. Smith, Architect, 145, Victoria-road North, Southsea | May 5 |
| *Sewerage Works | Bromley U.D.C. | Council's Surveyor, Bromley, Kent | do. |
| •Tar Paving Works | do. | do. | do. |
| *Supply of Road Materials | do. | do. | do. |
| •External Painting, &c., at Workhouse | St.George's (Hanover-sq.) Guardians | W. H. Chappell, Workhouse, Fulham-road, S.W. | May 6 |
| Sewerage Works, near Bridgend | Ogmore and Garw U.D.C. | H. D. Williams, Civil Engineer, Blackwill, Bridgend, Glam. | May 9 |
| Bridge Improvement Works, Blackford | Bury (Lancs) Corporation | Borough Engineer, Town Hall, Bury | do. |
| *Heating, Hot Water, &c., Infirmary, Highfield | Liverpool Select Vestry | Kirby & Willink, 5, Cook-street, Liverpool | May 11 |
| *Freshwater and Totland Main Sewerage Works | Isle of Wight R.D.C. | W. B. G. Bennett, Son, & Berry, Southampton | May 14 |
| *Municipal Technical Institute and Free Library | Borough of Portsmouth | Not stated | May 19 |
| Chimney Shaft (126 ft. high) at Electric Station, Slough | ..... | G. H. Gibson, High Wycombe | No date. |
| Sewerage Works, Rhyl, North Wales | ..... | A. K. Howard, 2, Winchester-road, South Hampstead, N. | do. |
| House, Heacham, King's Lynn | ..... | W. A. Leach, Architect, Hunstanton | do. |
| Business Premises and two Houses, St. Thomas, Exeter | ..... | J. A. Lucas, Architect, Guildhall Chambers, Exeter | do. |
| Laying Water Main | Amble U.D.C. | W. Gibson, Surveyor 31, Queen-street, Amble | do. |
| Carshed, Stalybridge | Electricity Board | Hurrell & Taylor, 25, Brazenose-street, Manchester | do. |
| Detached Dwelling House, Tintagel, N. Cornwall | ..... | J. A. Souttar, Architect, 41, Bishopsgate-street Within, E.C | do. |

## PUBLIC APPOINTMENTS.

| Nature of Appointment. | By whom Advertised. | Salary. | Application to be in |
|---|---|---|---|
| *Architect and Surveyor of School Buildings | Devon County Council | 400*l.*, &c. | April 29 |
| *Architects | Manchester Royal Infirmary Board | Not stated | May 1 |

*Those marked with an asterisk (*) are advertised in this Number.* *Competitions*, iv. *Contracts*, iv. vi. viii. & x. *Public Appointments*, xviii.

## PRICES CURRENT (*Continued*).

### WOOD.

| | At per standard. £ s. d. | £ s. d. |
|---|---|---|
| White Sea and Petersburg :— | | |
| First white deals, 3 in. by 11 in. | 14 10 0 | 15 10 0 |
| " " 3 in. by 9 in. | 13 10 0 | 14 10 0 |
| Battens | 11 0 0 | 12 0 0 |
| Second white deals 3 in. by 11 in. | 13 10 0 | 14 10 0 |
| " " " 3 in. by 9 in. | 12 10 0 | 13 10 0 |
| " " " battens | 9 10 0 | 10 10 0 |
| Pitch-pine : deals | 16 0 0 | 18 0 0 |
| Under 2 in. thick extra | 0 10 0 | 1 0 0 |
| Yellow Pine—First, regular sizes | 33 0 0 | upwards. |
| Oddments | 22 0 0 | 24 0 0 |
| Seconds, regular sizes | 24 10 0 | 26 10 0 |
| Yellow Pine Oddments | 20 0 0 | 22 0 0 |
| Kauri Pine—Planks, per ft. cube | 0 3 6 | 0 4 6 |
| Danzig and Stettin Oak Logs— | | |
| Large, per ft. cube | 0 2 6 | 0 3 6 |
| Small " " | 0 2 3 | 0 2 6 |
| Wainscot Oak Logs, per ft. cube | 0 5 0 | 0 5 6 |
| Dry Wainscot Oak, per ft. sup. as inch | 0 0 7 | 0 0 8 |
| ¾ in. do. do. | 0 0 6½ | - - - |
| Dry Mahogany— | | |
| Honduras, Tabasco, per ft. sup. as inch | 0 0 9 | 0 0 11 |
| Selected, Figury, per ft. sup. as inch | 0 1 6 | 0 2 0 |
| Dry Walnut, American, per ft. sup. as inch | 0 0 10 | 0 1 0 |
| Teak, per load | 16 10 0 | 20 0 0 |
| American Whitewood Planks— | | |
| Per ft. cube | 0 4 0 | - - - |
| Prepared Flooring— | Per square. | |
| 1 in. by 7 in. yellow, planed and shot | 0 13 6 | 0 17 6 |
| 1 in. by 7 in. yellow, planed and matched | 0 14 0 | 0 18 0 |
| 1¼ in. by 7 in. yellow, planed and matched | 0 16 0 | 1 1 6 |
| 1 in. by 7 in. white, planed and shot | 0 11 6 | 0 13 6 |
| 1 in. by 7 in. white, planed and matched | 0 12 0 | 0 14 0 |
| 1¼ in. by 7 in. white, planed and matched | 0 14 6 | 0 16 6 |
| ¾ in. by 7 inch yellow matched and beaded or V-jointed boards | 0 11 0 | 0 13 6 |
| 1 in. by 7 in. do. do. do. | 0 14 0 | 0 18 0 |
| ¾ in. by 7 in. white do. do. | 0 10 0 | 0 11 6 |
| 1 in. by 7 in. do. do. do. | 0 11 6 | 0 13 6 |

6-in. at 6d. to 9d. per square less than 7-in.

### JOISTS, GIRDERS, &c.

| | In London, or delivered Railway Vans, per ton. £ s. d. | £ s. d. |
|---|---|---|
| Rolled Steel Joists, ordinary sections | 6 5 0 | 7 5 0 |
| Compound Girders " " | 8 2 6 | 9 5 0 |
| Angles, Tees and Channels, ordinary sections | 7 17 6 | 8 17 6 |
| Flitch Plates | 8 5 0 | 8 15 0 |
| Cast Iron Columns and Stanchions, including ordinary patterns | 7 2 6 | 8 5 6 |

### METALS.

| | Per ton, in London £ s. d. | £ s. d. |
|---|---|---|
| IRON— | | |
| Common Bars | 7 15 0 | 8 5 0 |
| Staffordshire Crown Bars, good merchant quality | 8 5 0 | 8 15 0 |
| Staffordshire "Marked Bars" | 10 10 0 | - - - |
| Mild Steel Bars | 9 0 0 | 9 10 0 |
| Hoop Iron, basis price | 9 5 0 | 9 10 0 |
| " " galvanised | 16 0 0 | - - - |
| (* And upwards, according to size and gauge.) | | |
| Sheet Iron, Black.— | | |
| Ordinary sizes to 20 g. | 10 0 0 | - - - |
| " " to 24 g. | 11 0 0 | - - - |
| " " to 26 g. | 12 10 0 | - - - |
| Sheet Iron, Galvanised, flat, ordinary quality— | | |
| Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g. | 12 15 0 | - - - |
| " " 22 g. and 24 g. | 13 5 0 | - - - |
| " " 26 g. | 14 5 0 | - - - |
| Sheet Iron, Galvanised, flat, best quality :— | | |
| Ordinary sizes to 20 g. | 16 0 0 | - - - |
| " " 22 g. and 24 g. | 16 10 0 | - - - |
| " " 26 g. | 18 0 0 | - - - |
| Galvanised Corrugated Sheets :— | | |
| Ordinary sizes, 6 ft. to 8 ft. 20 g. | 12 15 0 | - - - |
| " " 22 g. and 24 g. | 13 5 0 | - - - |
| " " 26 g. | 14 5 0 | - - - |
| Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. by 20 g. and thicker | 12 0 0 | - - - |
| " " 22 g. and 24 g. | 13 0 0 | - - - |
| " " 26 g. | 14 5 0 | - - - |
| Cut nails, 3 in. to 6 in. | 9 5 0 | 9 15 0 |
| (Under 3 in. usual trade extras.) | | |

### LEAD, &c.

| | Per ton, in London. £ s. d. | £ s. d. |
|---|---|---|
| LEAD—Sheet, English, 3 lbs. & up. | 15 7 6 | - - - |
| Pipe in coils | 15 17 6 | - - - |
| Soil pipe | 18 7 6 | - - - |
| Compo Pipe | 18 7 6 | - - - |
| ZINC—Sheet— | | |
| Vieille Montagne ton | 28 5 0 | - - - |
| Silesian | 28 0 0 | - - - |
| COPPER— | | |
| Strong Sheet per lb. | 0 0 10½ | - - - |
| Thin " | 0 0 11½ | - - - |
| Copper nails " | 0 0 11½ | - - - |
| BRASS— | | |
| Strong Sheet " | 0 0 10 | - - - |
| Thin " | 0 0 11 | - - - |
| TIN—English Ingots " | 0 1 5 | - - - |
| SOLDER—Plumbers' " | 0 0 6½ | - - - |
| Tinmen's " | 0 0 8½ | - - - |
| Blowpipe " | 0 0 9½ | - - - |

## PRICES CURRENT (*Continued*).

### ENGLISH SHEET GLASS IN CRATES.

| | £ s. d. per ft. delivered. |
|---|---|
| 15 oz. thirds | 2½d. per ft. delivered. |
| " fourths | 1¾d. " " |
| 21 oz. thirds | 3¼d. " " |
| " fourths | 2½d. " " |
| 26 oz. thirds | 4d. " " |
| " fourths | 3¼d. " " |
| 32 oz. thirds | 5d. " " |
| " fourths | 4¼d. " " |
| Fluted sheet, 15 oz. | 3d. " " |
| " 21 oz. | 4d. " " |
| ⅛ Hartley's Rolled Plate | 1¾d. " " |
| ⅜ " " " | 2d. " " |
| ½ " " " | 2¼d. " " |

### OILS, &c.

| | | £ s. d. |
|---|---|---|
| Raw Linseed Oil in pipes or barrels | per gallon | 0 2 3 |
| " " " in drums | " | 0 2 7 |
| Boiled " " in pipes or barrels | " | 0 2 5 |
| " " " in drums | " | 0 2 9 |
| Turpentine, in barrels | " | 0 3 8 |
| " in drums | " | 0 3 10 |
| Genuine Ground English White Lead | per ton | 21 10 0 |
| Red Lead, Dry | " | 20 0 0 |
| Best Linseed Oil Putty | per cwt. | 0 8 0 |
| Stockholm Tar | per barrel | 1 12 0 |

### VARNISHES, &c.

| | Per gallon. £ s. d. |
|---|---|
| Fine Pale Oak Varnish | 0 8 0 |
| Pale Copal Oak | 0 10 6 |
| Superfine Pale Elastic Oak | 0 12 6 |
| Fine Extra Hard Church Oak | 0 10 0 |
| Superfine Hard-drying Oak, for Seats of Churches | 0 14 0 |
| Fine Elastic Carriage | 0 12 6 |
| Superfine Pale Elastic Carriage | 0 16 0 |
| Fine Pale Maple | 0 16 0 |
| Finest Pale Durable Copal | 0 18 0 |
| Extra Pale French Oil | 1 1 0 |
| Eggshell Flatting Varnish | 0 18 0 |
| White Copal Enamel | 1 4 0 |
| Extra Pale Paper | 0 12 0 |
| Best Japan Gold Size | 0 10 6 |
| Best Black Japan | 0 16 0 |
| Oak and Mahogany Stain | 0 9 0 |
| Brunswick Black | 0 8 6 |
| Berlin Black | 0 16 0 |
| Knotting | 0 10 0 |
| French and Brush Polish | 0 10 0 |

## TO CORRESPONDENTS.

J. W. B. (Amount should have been stated).

NOTE.—The responsibility of signed articles, letters, and papers read at meetings rests, of course, with the authors.

*We cannot undertake to return rejected communications.*

Letters or communications (beyond mere news items) which have been duplicated for other journals are NOT DESIRED.

All communications must be authenticated by the name and address of the sender, whether for publication or not. No notice can be taken of anonymous communications.

We are compelled to decline pointing out books and giving addresses.

Any commission to a contributor to write an article is given subject to the approval of the article, when written, by the Editor, who retains the right to reject it if unsatisfactory. The receipt by the author of a proof of an article in type does not necessarily imply its acceptance.

All communications regarding literary and artistic matters should be addressed to THE EDITOR; those relating to advertisements and other exclusively business matters should be addressed to THE PUBLISHER, and *not* to the Editor.

## TENDERS.

[Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than 10 a.m. on Thursdays*. N.B.—We cannot publish Tenders unless authenticated either by the architect or the building-owner; and we cannot publish announcements of Tenders accepted unless the amount of the Tender is given, nor any list in which the lowest Tender is under 100*l.*, unless in some exceptional cases and for special reasons.]

* Denotes *accepted*. † Denotes *provisionally accepted*.

GUILDFORD.—For the erection of buildings, &c., at the waterworks, Millmead, for the Town Council. Mr. C. G. Mason, C.E., Tuns Gate, Guildford :—

| | |
|---|---|
| Stevens & Sons | £507 |
| Trite & Robinson | 475 |

GUILDFORD.—For the erection of offices, &c., at Cattle Market, Woodbridge-road, for the Town Council. Mr. C. G. Mason, C.E., Tuns Gate, Guildford :—

| | | | |
|---|---|---|---|
| Wm. Young | £387 10 | Trite & Robinson | £331 0 |
| Stanley Ellis | 359 0 | Gwayne & Son, Guildford* | 315 0 |
| Mitchell Bros. | 333 0 | | |

HEBBURN.—For the execution of street works, for the Urban District Council. Mr. Curry, Surveyor, Hebburn :—

| | | | |
|---|---|---|---|
| Wardlaw | £3,720 13 2 | Robson | £2,936 13 6 |
| Thornton | 3,399 15 5 | Brown | 2,901 7 6 |
| Spur | 3,315 10 5 | G. Simpson, Newcastle* | 2,686 19 3 |
| Fisher | 3,017 2 0 | | |

HOVE.—For new street works in Poynter-road. Mr. H. H. Scott, Borough Surveyor :—

| | |
|---|---|
| Parsons & Sons, Hove* | £196 |

HOVE.—For erecting dwarf wall, gate piers, cast-iron railing and gates at new pleasure ground. Mr. H. H. Scott, Borough Surveyor :—

| | |
|---|---|
| Parsons & Sons, Hove* | £1,495 |

LANGUM.—For new chapel, Langum, Pembrokeshire. Messrs. G. Morgan & Son, architects, King-street, Carmarthen :—

| | |
|---|---|
| Davies & Morgan, Pembroke* | £1,335 |

LEEDS.—For the erection of a Wesleyan chapel and school, Green Hammerton, for the Trustees. Messrs. Danby & Simpson, architects, 10, Park-row, Leeds. Quantities by Messrs. Priestley & Sons, Leeds :—

| | |
|---|---|
| *Brick and Stone.*—Simpson & Son, York* | £300 0 0 |
| *Joinery.*—Kitching & Son, Knaresborough* | 199 18 6 |
| *Slating.*—Atkinson & Son, Leeds* | 37 0 0 |
| *Plumbing.*—J. H. Shouksmith, York* | 41 0 0 |
| *Plastering.*—Howroyd & Sons, Otley* | 16 0 0 |
| *Painting.*—Morley & Son, Knaresborough* | 27 19 0 |

LITTLEHAMPTON.—For the execution of paving works, Terminus and Western roads, for the Town Council. Mr. H. Howard, Surveyor, Town Offices, Littlehampton :—

| | | | |
|---|---|---|---|
| E. H. King | £172 0 0 | W. Wallis, Littlehampton* | £139 12 6 |
| E. G. Holland | 153 0 0 | | |

LONDON.—For house in Hendon-avenue, Finchley Church End, for Mr. H. Browning. Messrs. Whittaker & Bradburn, architects, 19, King Edward-street, Macclesfield. Quantities by Messrs. Bennett & Richardson, Church End, Finchley :—

| | | | |
|---|---|---|---|
| Edward Tribe | £1,786 0 0 | Godson & Sons | £1,452 0 0 |
| H. Parkinson | 1,729 18 7 | Matlock Bros. | 1,425 0 0 |
| H. Holloway | 1,643 0 0 | Coulsell Bros. | 1,413 0 0 |
| H. M. Dove | 1,625 0 0 | C. R. Price | 1,377 0 0 |
| Kerry & Son | 1,577 0 0 | Jesse Phœnix* | 1,370 0 0 |
| Gough & Co. | 1,474 0 0 | | |

LONDON.—For building new stores and stables at Kieselguhr Wharf, Homerton, N.E., for Messrs. A. Haacke & Co. (Conrad Lauer). Mr C. Collas Robin, architect, 203, Strand, W.C. :—

| | | | |
|---|---|---|---|
| Josolyne & Young | £998 0 | Auley & Son | £890 0 |
| Lascelles & Co. | 995 0 | W. Nash, New Cross* | 889 0 |
| Bull & Esdaile | 965 0 | | |
| Shurmur & Sons, Ltd. | 899 10 | | |

LONDON.—For the erection of a new police-station at North Woolwich. Mr. J. Dixon Butler, Surveyor to the Metropolitan Police. Quantities by Messrs. Thurgood, Son, & Chidgey, Charing Cross-chambers, Duke-street, Adelphi :—

| | | | |
|---|---|---|---|
| Wells & Sons | £9,475 | Perry & Co. | £8,700 |
| Lascelles & Co. | 8,972 | Grover & Sons | 8,647 |
| Lawrence & Sons | 8,948 | Lathey Bros. | 8,545 |
| Williams | 8,942 | Chessum & Sons | 8,499 |
| Hood | 8,919 | Lorden & Son | 8,388 |
| F. & H. F. Higgs | 8,886 | Richardson | 8,032 |
| Holloway Bros. | 8,779 | | |

LUTON.—Accepted for the supply of road material (one year) for the Town Council. Mr. A. J. L. Evans, Borough Surveyor, Town Hall, Luton :—

*Broken Granite.*

| | Size. in. | Per ton. tons. | s. | d. |
|---|---|---|---|---|
| Ellis & Everard, Bardon Hill | 2 | 100 | 11 | 9 |
| | 1¾ | 300 | 12 | 3 |
| Enderby and Stoney Stanton Granite Co., Narborough | 1¾ | 700 | 11 | 0 |
| Cliffe Hill Granite Co., Markfield | 2 | 100 | 10 | 8 |
| | 1¾ | 300 | 10 | 11 |
| Forest Rock Granite Co., Whitwick | 1¾ | 150 | 10 | 3 |
| Mountsorrel Granite Co., Loughborough | 2 | 200 | 11 | 3 |
| Whitwick Granite Co., Whitwick | 1¾ | 300 | 10 | 9 |

*Broken Slag.*

| | | | | |
|---|---|---|---|---|
| Kettering Iron Co., Kettering | 2 | 100 | 6 | 0 |
| | 1½ | 700 | 6 | 0 |
| | 1 | 50 | 5 | 4 |
| | Screenings | 200 | 5 | 4 |
| | Dust | 80 | 5 | 4 |

NELSON (Lancs).—Accepted for the erection of a school chapel, Bradshaw-street and Entwistle-street. Mr. Harry Whittaker, architect, 21, Market-square, Nelson :—

| | |
|---|---|
| *Mason.*—A. Robinson, Victoria-avenue, Brierfield | £660 1 6 |
| *Joiners.*—Co-operative Society, Ltd., Bowling-row, Nelson | 330 19 8 |
| *Plumbers.*—Co-operative Society, Ltd., Scotland-road, Nelson | 99 7 0 |
| *Slater.*—Wm. Schofield, Colne-road, Burnley | 89 12 3 |
| *Plasterer.*—E. Butler, Gisburn-road, Barrowford | 36 5 0 |
| *Electric Lighting.*—Jackson & Co., Standish-street, Burnley | 22 10 0 |
| *Painting.*—Robt. Clark, York-street, Barnoldswick | 20 0 0 |
| Total | £1,258 15 5 |

NEW TREDEGAR (Mon).—For the conversion of the Rechabites' Hall into Council Offices, &c., for the Bedwellty Urban District Council. Mr. J. H. Lewis, Surveyor, Blackwood, Mon. Quantities by Surveyor, Blackwood, Mon. :—

| | | | |
|---|---|---|---|
| Williams & Sons | £152 10 1 | D. Williams, School-street, New Tredegar | £116 15 10 |
| H. Rowlands | 121 1 6 | | |

PEMBROKE DOCK.—For the erection of a masonic hall. Messrs. G. Morgan & Son, architects, King-street, Carmarthen :—

| | |
|---|---|
| Charles Young, Gwyther-street, Pembroke Dock* | £963 |

[*See also next page.*

PENMAENMAWR.—For twelve workmen's dwellings at Penmaenmawr, North Wales, for Messrs. Brundrit & Co., quarry proprietors. Mr. Richard Davies, architect, Bangor:—

| | |
|---|---|
| Jones & Pritchard | £2,921 0 0 |
| Roberts Bros. | 2,916 0 0 |
| Roberts & Owen | 2,581 2 8 |
| Rob. G. Williams, Llanfairfechan‡ | 2,052 0 0 |
| William G. Williams | 1,829 12 8 |

‡ Amended and accepted at £1,956: four of the houses made smaller in size.

PONTRANE.—For new vicarage, Pontrane, Pembrokeshire. Messrs. G. Morgan & Son, architects, Kingstreet, Carmarthen:—

| | |
|---|---|
| Young Bros., Mynachlogddu, Clynderwen, R.S.O.* | £1,100 |

SCARBOROUGH.—For the erection of Wesleyan church and school, Cayton, for the Trustees. Messrs. Danby & Simpson, architects, 10, Park-row, Leeds. Quantities by Messrs. Priestley & Sons, Leeds:—

| | |
|---|---|
| *Brick and Stone.*—A. Coultas, Scarborough* | £506 0 |
| *Joinery.*—F. O. Farrall, Leeds* | 345 0 |
| *Slating.*—Atkinson & Son, Leeds* | 72 13 |
| *Plumbing and Glazing.*—H. L. Gledhill, Cayton* | 72 0 |
| *Plastering.*—H. Proctor, Scarborough* | 49 0 |
| *Painting.*—J. W. Grassam, Scarborough* | 27 13 |

SCARBOROUGH.—For repairing and alterations to Queen-street Wesleyan Chapel, for the Trustees. Messrs. Danby & Simpson, architects, Park-row, Leeds:—

| | |
|---|---|
| *Joinery.*—Jas. Taylor, Ltd., Guiseley* | £1,228 18 |
| *Brick and Stone.*—W. T. Petch, Scarborough* | 289 0 |
| *Plumbing.*—Stephenson Bros., Scarborough* | 273 18 |
| *Heating Engineers.*—Appleby & Brogden, Scarborough* | 199 0 |
| *Electric Lighting.*—C. L. Sanderson, Scarborough* | 253 2 |
| *Decorating.*—Richard Kelly, Scarborough* | 158 0 |

SHEFFIELD.—For five dwelling-houses and conveniences in Loxley New-road, Malin Bridge, Sheffield, for Messrs. the Directors of Thomas Rawson & Co., Limited. Messrs. Hall & Fenton, architects, &c., 14, St. James's-row, Sheffield. Quantities by the architects:—

| | | | |
|---|---|---|---|
| J. Bertram | £1,610 15 0 | J. Reed | £1,103 0 0 |
| J. Robertson | 1,494 0 0 | C. Earl | 1,090 0 0 |
| R. S. Saville | 1,225 2 6 | W. C. Hancock, 71, Roebuck-road* | 1,081 0 0 |
| R. Charlesworth | 1,213 17 0 | | |
| W. Ainsley | 1,213 18 0 | | |

SHEFFIELD.—For stabling, &c., to The Falstaff Inn, Wicker and Willey-street, for Messrs. the Directors of Thomas Rawson & Co., Limited. Messrs. Hall & Fenton, architects, &c., 14, St. James's-row, Sheffield. Quantities by the architects:—

| | | | |
|---|---|---|---|
| C. H. Gillam | £943 0 | E. Moore | £877 10 |
| Mustin & Son | 925 0 | T. Margerrison, Dronfield* | 877 0 |
| G. Allen | 915 0 | | |
| A. Bradbury | 901 13 | | |

WYKE REGIS (Dorset).—For the execution of sewerage works for the Weymouth Rural District Council. Messrs. Lemon & Blizard, C.E., Castle-lane, Southampton. Quantities by Mr. John H. Blizard, A.M.Inst.C.E.:—

| | | | |
|---|---|---|---|
| R. H. B. Neal | £7,667 0 0 | A. G. Osenton | £5,129 17 3 |
| J. A. Bartlett | 6,894 0 0 | S. Dood | 5,009 10 5 |
| Bugbird & Co. | 6,203 0 0 | Whettam, jun. | 4,980 0 0 |
| F. W. Trimm | 5,481 0 0 | Cooke & Co. | 4,900 0 0 |
| Streeters & Todhunter | 5,288 0 0 | Jesty & Baker, Portland* | 4,600 0 0 |

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## PUBLISHER'S NOTICES.

THE INDEX (with TITLE-PAGE) for VOLUME LXXXIII. (July to December, 1902) was given as a supplement with the number for January 10th.

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LASCELLES' CONCRETE.
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Bank, Office, & Shop Fittings.
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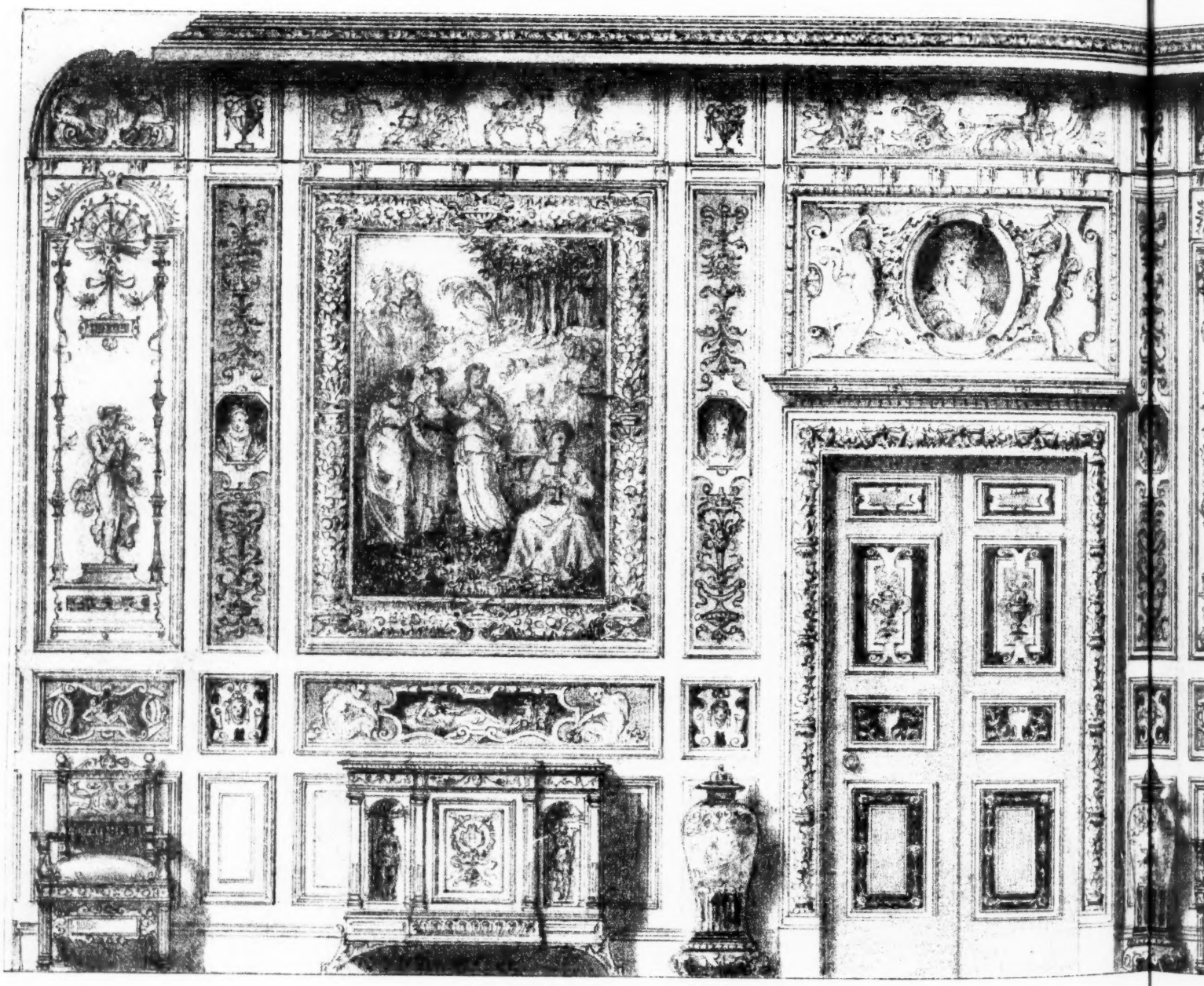
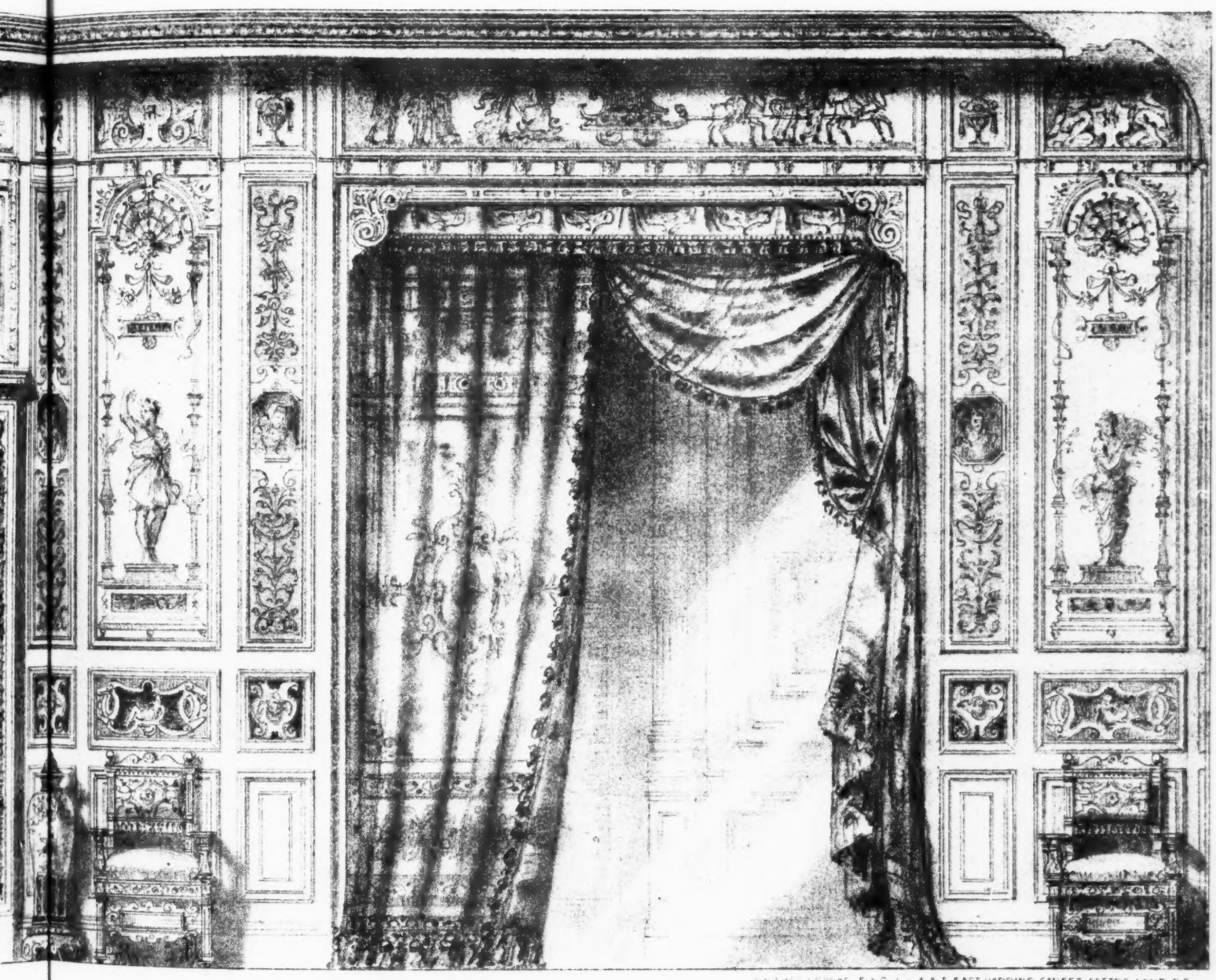


ANTE-ROOM DECORATION—By Mr. T



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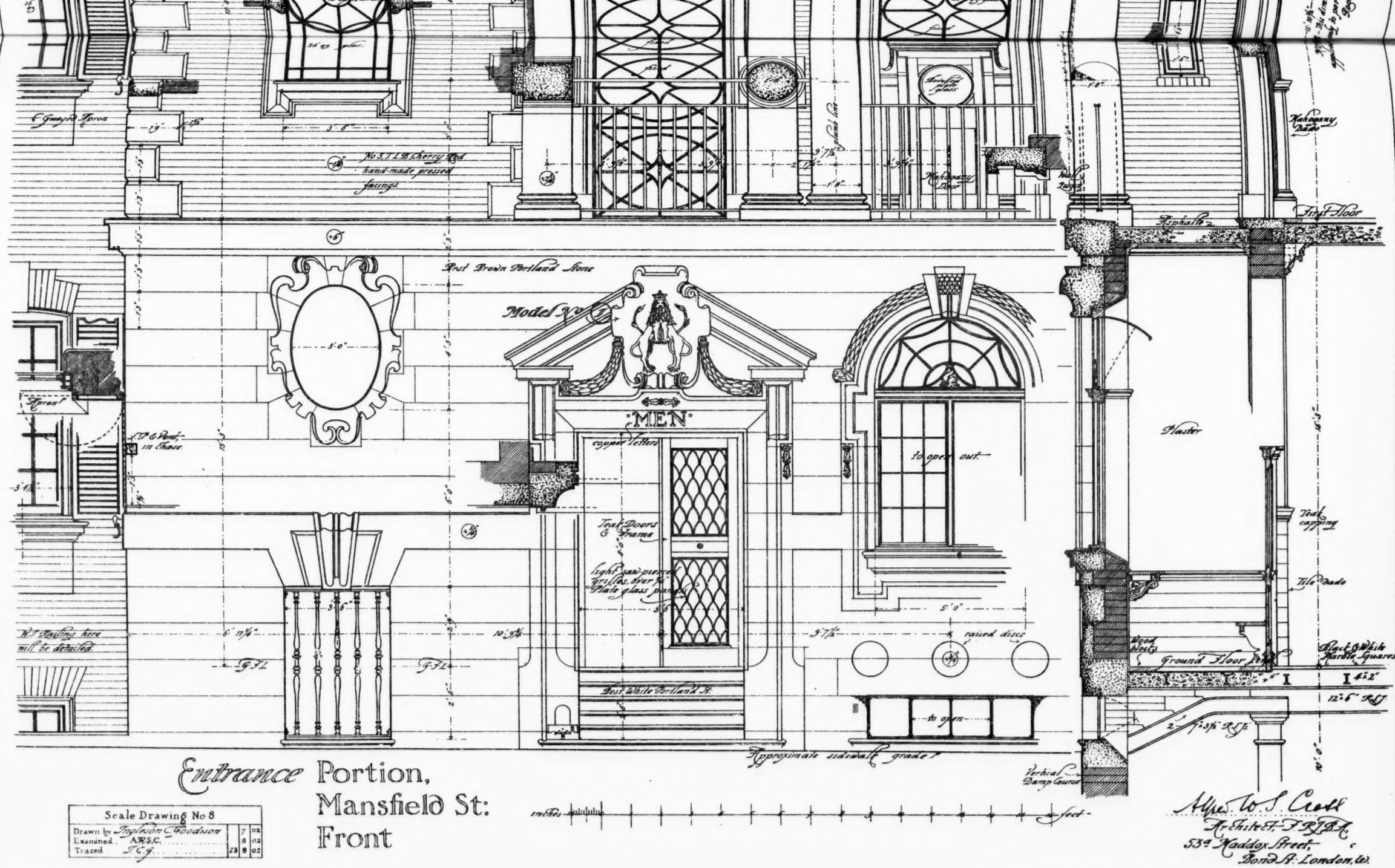
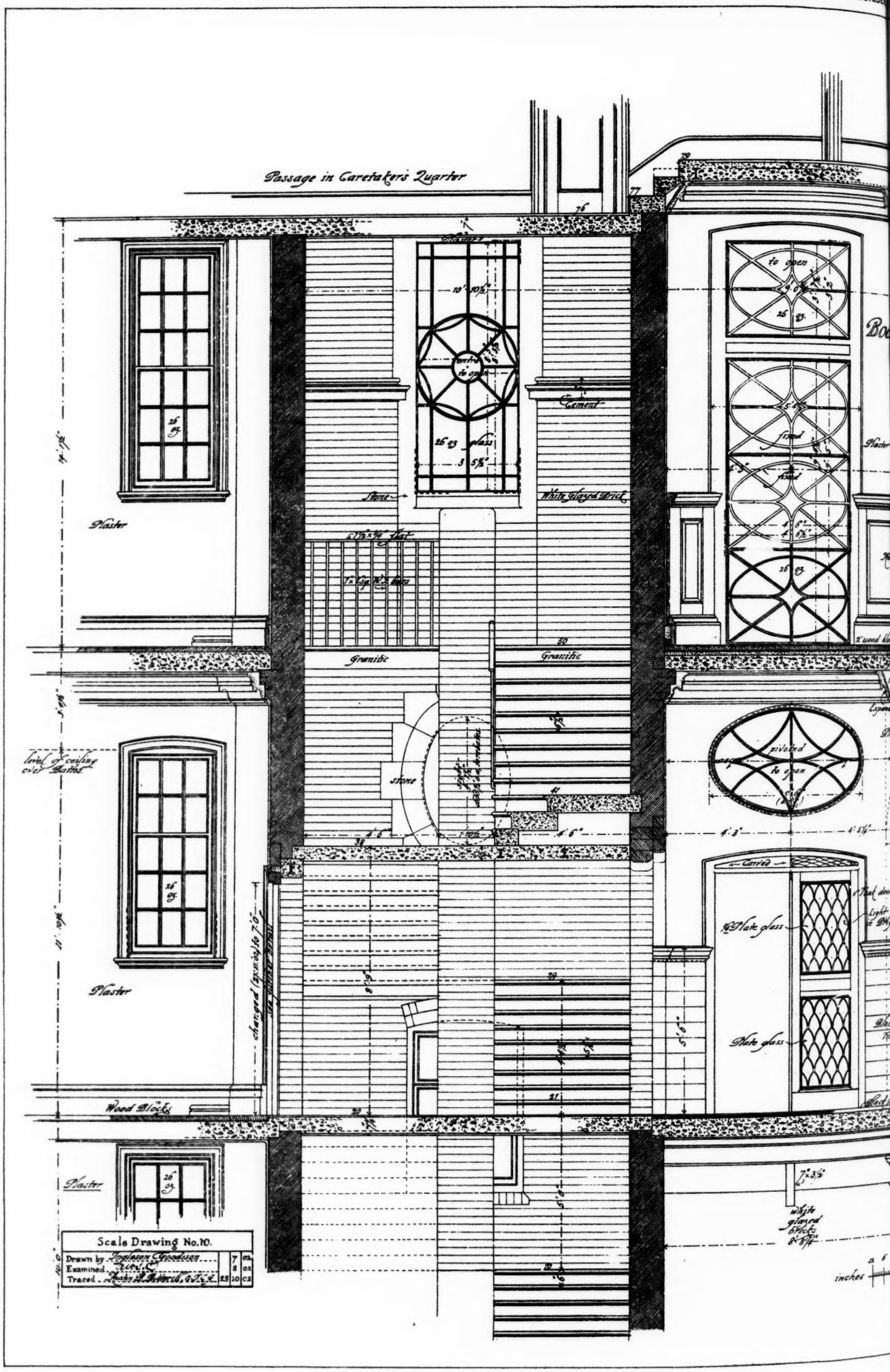
TION.—By Mr. Thomas Wallace Hay

# HAGGERSTON PUBLIC BATHS

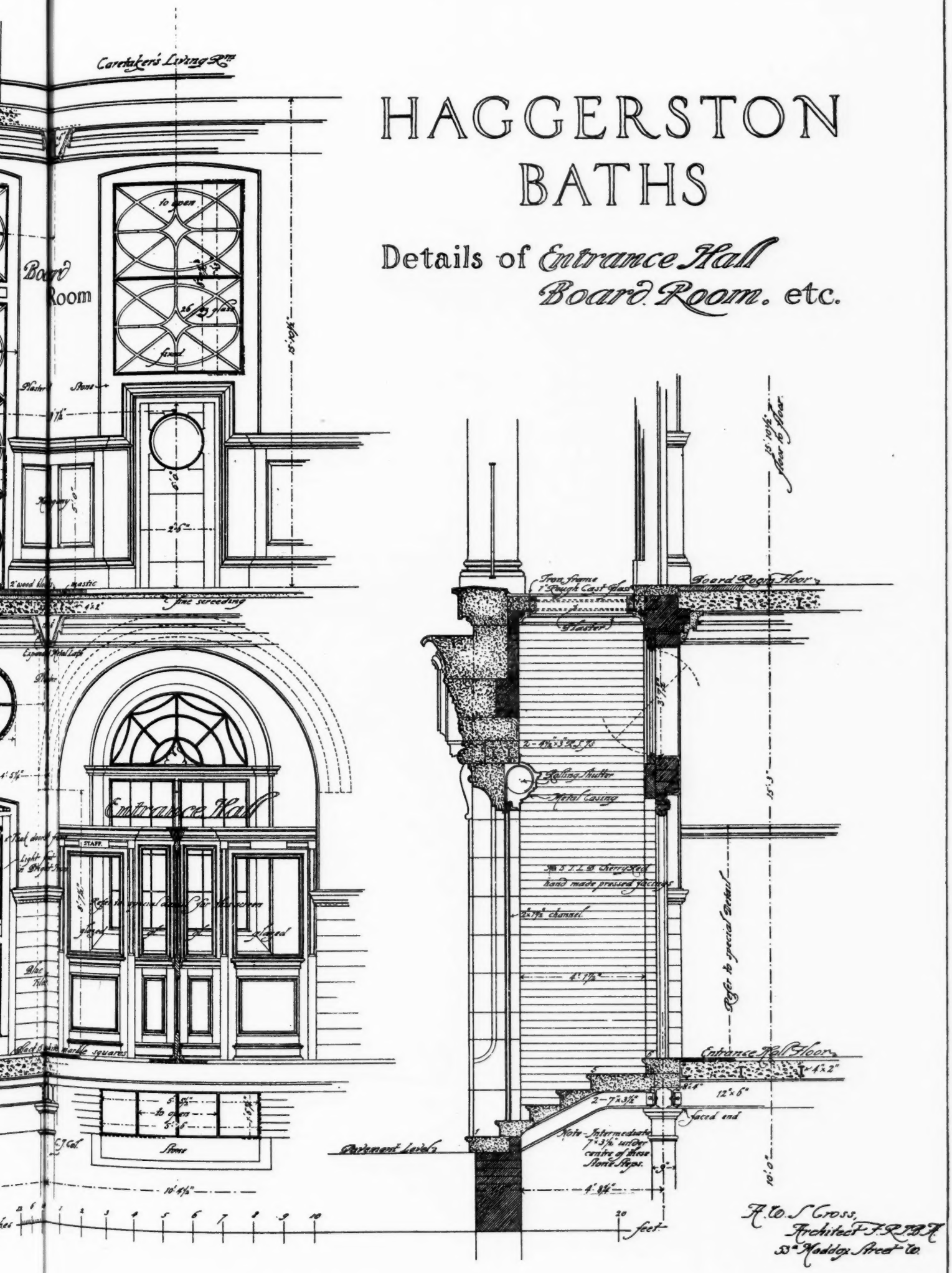
Stone
Brick
Green Tilberthwaite Fan Slating
Lead
References
Stone
Brick
Wood
in front of Building line
behind do. do.
Model No. 3
Model No. 2
Second Floor Level
Binder 9"x3"
11"x2"
4½"x2"
stone
Stone Architraves
26 oz glass.
to open
fixed
to be obscure glazed
Note.—The dimension marked ‡ to portion of Front Room


Red Brown Portland Stone
Model No 1
MEN
copper letters
Teak Doors & frames
to open out
to open
raised discs
No 3 T L B cherry red hand-made pressed facings
Mahogany Dado
Mahogany Door
Asphalte
First Floor
Plaster
Teak capping
Tile Dado
Good Necks
Ground Floor
Black & White Marble Squares
Teak Doors & Frames
Light iron piers & grilles over & Plate glass panels
Best White Portland St.
Approximate sidewalk grade
Vertical Damp Course
W.C. Heating here will be detailed
Gas Fit.
Gas Fit.
Gas Fit.


Passage in Caretaker's Quarter
Plaster
Granitic
Granitic
Cement
White glazed brick
Stone
Plate glass
Plate glass
Wood Blocks
Plaster
Plaster
Board
Room
pivoted
to open
Carved
Scale Drawing No. 10.
Drawn by
Examined
Traced
inches

# HAGGERSTON BATHS

## Details of *Entrance Hall Board Room.* etc.




R. W. S. Cross,
Architect F.R.I.B.A.
53 Haddon Street W.

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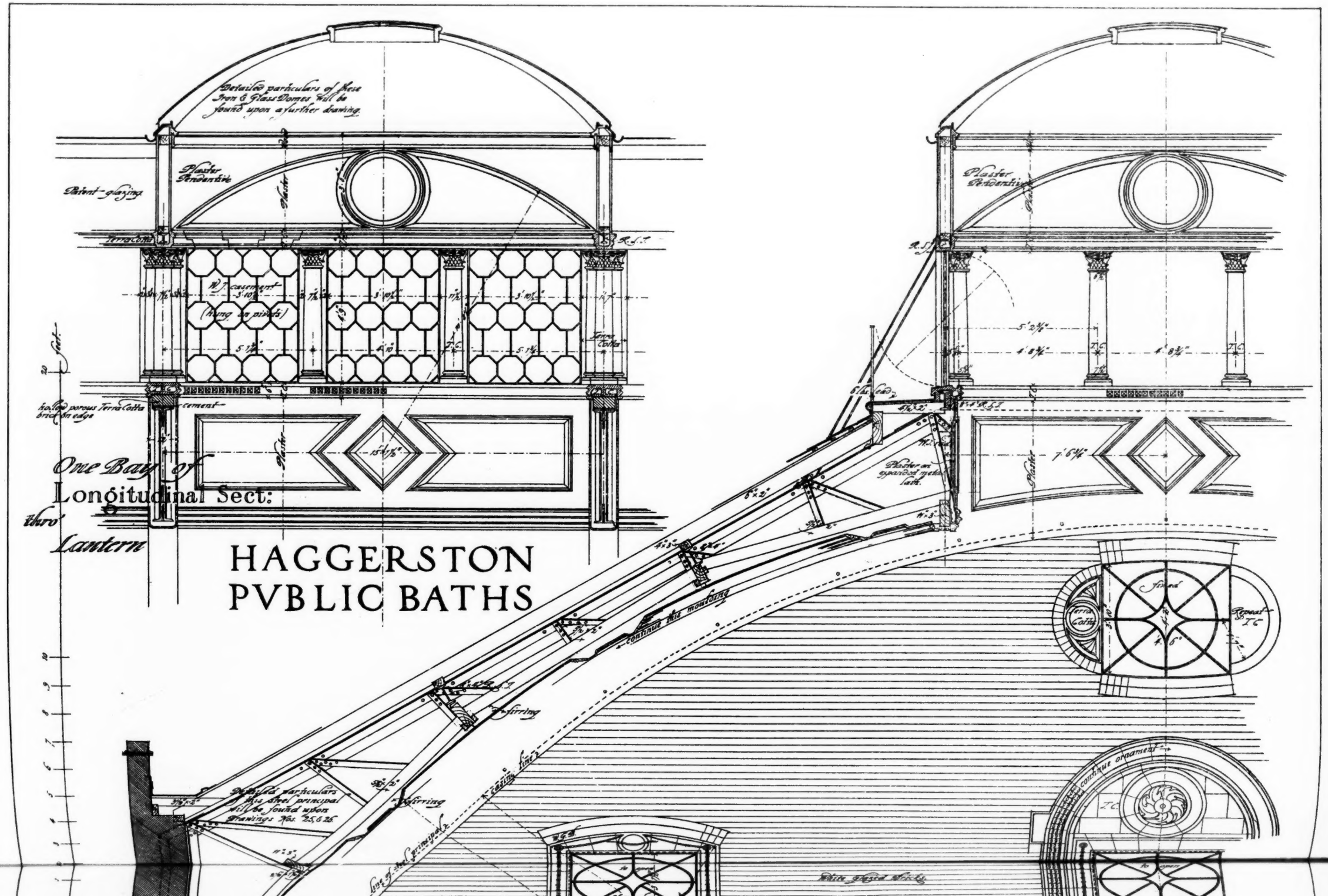
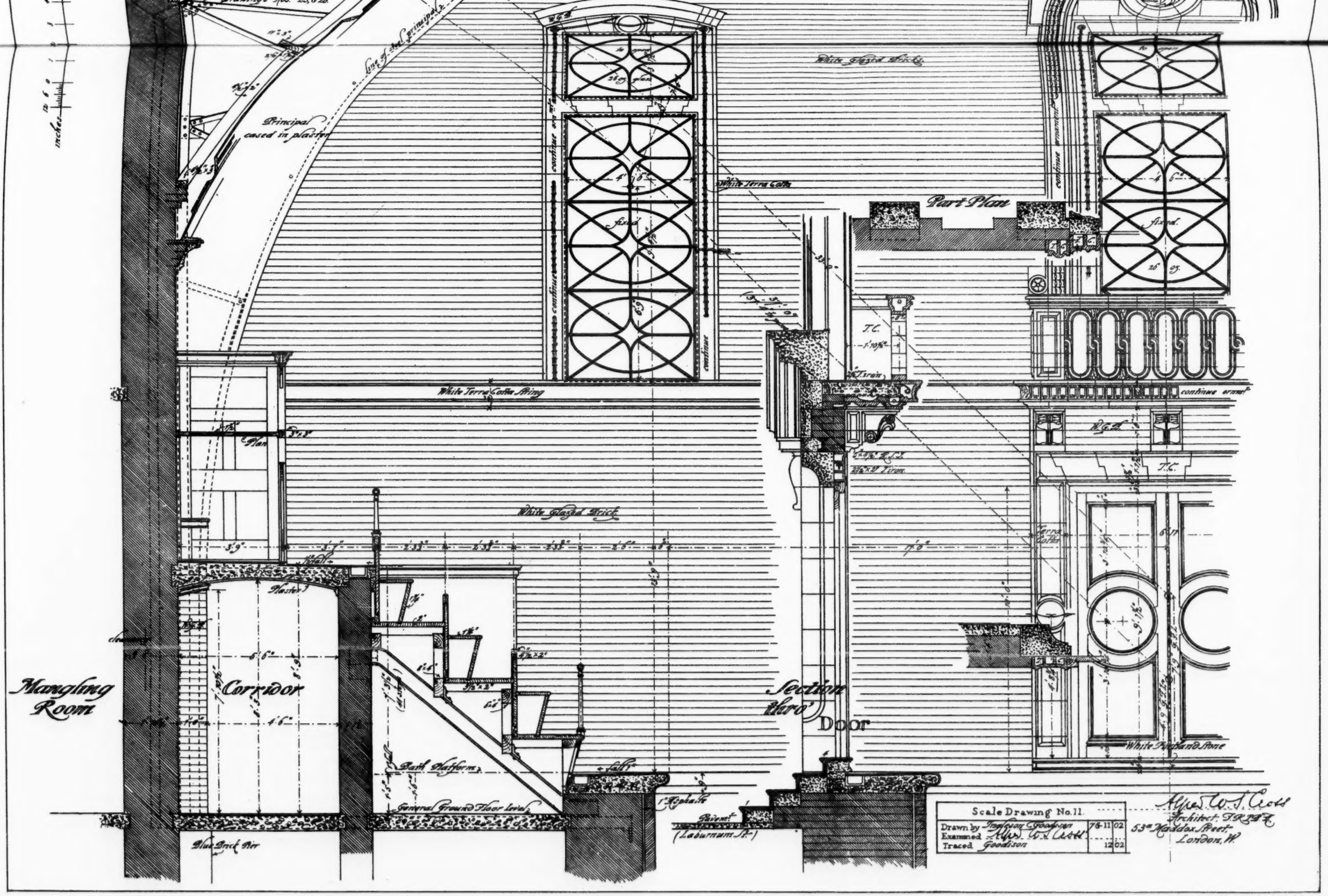
PUBLIC BATHS.—Mr. A. W. S. Cross, F.R.I.B.A., Architect.

# HAGGERSTON PUBLIC BATHS

One Bay of Longitudinal Sect: thro' Lantern



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